Clinical Lectures
ON
EXCAVATION OF THE LUNG IN PHTHISIS.

Delivered at the Brompton Hospital for Consumption and Diseases of the Chest,

BY R. DOUGLAS POWELL, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL.

LECTURE V.

Hæmorrhage from cavities — Analysis of fourteen museum specimens from cases of fatal hæmoptysis—Pathology—Signs of hæmorrhage from pulmonary aneurisms—Prognosis—Cases of recovery—Treatment.

GENTLEMEN,—I have on the table before me fourteen specimens which I will ask you carefully to inspect, all of them, with one exception, removed from patients who had died of hæmoptysis. This group fairly illustrates the pathology of that fatal accident when, as is usually the case, it occurs at the period of phthisis which we have at present under consideration. Of these specimens three show large branches of the pulmonary artery, simply exposed and more or less eroded in cavities — (*a*) by the breaking away of the surrounding tissue in the process of excavation, or (*b*) by subsequent ulcerative erosion of the cavity wall. Six are examples of aneurismal dilatations, more or less typically sacculated, projecting into cavities from pulmonary vessels which are generally traversing a small portion of the cavity wall on their way further. The sacs vary in size from that of a pea to that of a large unshelled walnut; some are empty, others are partially or completely filled with laminated clot, presenting perfect pictures in miniature of sacculated aneurisms of the aorta or of other systemic vessels. In two instances the aneurismal dilatation involves the whole calibre of the vessel instead of projecting from one side of it, and are therefore of the fusiform kind. The remaining four or five specimens show lateral bulging affecting only or principally the cavity side of exposed vessels, and may therefore be described as *ectasias* of the pulmonary branches.

If we now look to the characters of the cavities in which these aneurisms or exposed vessels are found, we see that in eleven instances the cavities are truly pulmonary, having been formed by the destruction and removal of lung-tissue. And it is important to observe that in the great majority of instances these cavities are chronic, showing a more or less distinct limiting membrane and induration of surrounding lung. In two instances, however—and in both these cases fatal hæmorrhage has ensued from erosion of exposed vessels which had not become aneurismal, — the cavities were active: in the one case, a chronic cavity undergoing active ulcerative inflammation; in the other case, a recent cavity formed by the rapid breaking down of the pulmonary tissue and the coalescence of adjacent cavities. In four cases you will observe that the aneurisms occupy bronchial cavities. In one of these the aneurism projects into the calibre of a bronchus as it is on the point of terminating in a large cavity. This case was a very remarkable one, the only one in which any physical signs were observed which were distinctly referable to the aneurism. On examining the patient only a few hours before his unexpected death, a peculiar variety of amphoric breathing was heard on the left side, opposite the second rib and interspace, a little within the nipple line. The first third or half of the inspiration was jerking, and would be best described as interruptedly amphoric; the remaining part of the inspiration and the expiration were equally amphoric. The only explanation of this peculiar modification of the amphoric breathing which suggested itself at the time was that a plug of mucus partially obstructed a large bronchus at its entrance into a cavity, so that, on the cavity becoming more expanded during the latter half of inspiration, there was room enough for air to pass in an uninterrupted current. The physical sign was, at all events, so striking as to lead me to speculate with the gentleman who was going round with me as to its cause. The patient died the next morning almost instantaneously of hæmoptysis, and post mortem we found this small aneurism situated as you observe, and thus completely explaining the sound heard during life. The aneurism itself had not ruptured, but a continuation of the vessel had become exposed and eroded in the cavity, which was undergoing active ulceration. In these other two specimens there are three aneurismal sacs nestling in bronchial dilatations, as has been carefully demonstrated by my colleague, Dr. R. Thompson, who put them up. I do not think aneurism of the pulmonary artery in a bronchial dilatation has been before described; it is certainly of rare occurrence—much more rare, indeed, than is represented by these three cases out of a collection of fourteen. In intimate pathology these aneurismal affections of the pulmonary artery differ but little from those of other vessels.

Aneurism of the pulmonary artery was long disregarded as a cause of hæmoptysis, although the possibility of its occurrence was suggested by Laennec in 1827, and examples were positively described by Rokitansky in 1852. The two cases (of which here are the specimens) which occurred at this hospital, and were published in the *Medical Times and Gazette* and the Pathological Transactions by our present consulting physicians, Dr. Cotton and Dr. Quain respectively, were the first to draw general attention to the frequency with which fatal hæmoptysis arises from this cause. Atheroma of the pulmonary artery is so uncommon that this vessel has been looked upon as being almost invulnerable. It was long thought that the venosity of the blood contained in the pulmonary system was the reason this vessel so rarely became diseased; but, as Dr. Moxon has pointed out, the very conditions which lead to the production of atheroma of the pulmonary arteries—conditions, namely, which, such as mitral obstruction, cause increased pressure of blood in the pulmonary circulation—tend to cause also increased venosity of blood.

Strain may be looked upon as the principal determining cause of aneurism of the pulmonary artery, as it is perhaps the most frequent cause of aneurisms elsewhere. There are two sources of strain upon the pulmonary vessels in the cases of phthisis in which this form of hæmoptysis most often occurs—first, there is heightened blood-pressure in the pulmonary circulation; and, secondly, there is local loss of support on that side of a vessel which becomes partially exposed in a cavity. I have already pointed out that in the majority of these specimens, the cavities are chronic, and of more or less old standing. These cases were also for the most part one-sided cases, the opposite lung being but slightly or recently involved. In such cases we have increased resistance to the pulmonary circulation, from the extensive obliteration of vessels; we also have considerable renovation of blood volume, the patients often gaining weight and strength up to the time of their attack of hæmoptysis. After death in these cases, the right side of the heart is commonly found to be hypertrophied to compensate for the increased resistance to circulation. Any vessels traversing the walls of these chronic cavities which may remain pervious, have time slowly to expand on the exposed side.

The first part of this process of expansion consists of a thickening of the wall of the vessel, which has been regarded as a local hypertrophy to compensate for the increased strain at the exposed point. That it is not, however, a hypertrophic, but an inflammatory thickening, is clear from its being limited to that side of the vessel which is exposed, and on microscopical examination we find a blending of the tunics in a fibro-nuclear growth, which obscures all appearance of muscular coat. That the thickening, too, does not compensate in any effectual way for the increased strain is obvious, for from the earliest period there is commencing dilatation of the vessel, which is exaggerated in appearance by the local thickening of its walls. Subsequently, the thickened wall, degenerating and continuing to yield before the blood-pressure, becomes thin and papery, and finally rupture takes place.

That the disease of the pulmonary artery in these cases

BEST COPY AVAILABLE

is entirely local, and determined only by the lung disease, is probable from the fact that other portions of the vessel are commonly not at all affected. There is no age at which such disease may not occur. I have found dilatation and erosion of a branch of the pulmonary artery in a tubercular cavity giving rise to fatal hæmoptysis in an infant seven months old.[1] Dr. Hilton Fagge has recently recorded a case of aneurism occurring in a child aged three years. The ages of the cases which have occurred at this hospital have ranged from fourteen to forty years. Neither alcoholism, nor syphilis, nor kidney disease, specially prevail in these cases.

There were, save in the one case to which I have referred, no physical signs which indicated the existence of aneurism or ectasia. But the symptoms will often lead us to a correct diagnosis. Copious hæmorrhage from the lungs, the blood being pure, but of a dark colour, has its source from a branch of the pulmonary artery. Such a hæmorrhage may be at once fatal. In some of the most suddenly fatal cases, too, the amount of blood expectorated is very small, only perhaps an ounce or two, the patient dying at once from asphyxia from the blood being inhaled into and occluding the bronchial tubes. In many, perhaps in most cases, however, the patients rally from the first attack, and in a few hours, or a day or two, have a second and perhaps many succeeding attacks. This *recurrent hæmoptysis* is most characteristic of sacculated aneurism in a pulmonary cavity.

Hæmoptysis from this source is by no means always so fatal as this dismal array of museum specimens upon the table might lead you to infer. If you will more closely inspect some of these sacculated aneurisms, you will observe that they are almost completely filled with laminated clot, and cure of the aneurism may undoubtedly sometimes take place in this way. I might mention several cases by way of contrast to these remnants of mortality. One, that of a man who, four years ago, was in Dr. Cotton's ward with a large chronic cavity in the right lung; he had the most desperate hæmoptysis, repeated daily for many days, and occasionally again breaking out for three months. He remained in the hospital for six months, and then returned home with his pulmonary disease arrested. He was admitted again last summer, after an interval of two years, into one of my wards: he had had no return of the hæmoptysis, and he again left the hospital after three months without any further attack.[2] Another patient I had hoped to have brought here to-day, an engine-fitter, of sanguine temperament, aged thirty-five, who five years ago, when an outpatient under my care, had very copious hæmoptysis recurring daily for many days together, then being arrested for a few weeks, during which time the patient, who had a small limited cavity at the summit of the left lung, would rapidly regain flesh and make blood; then his hæmorrhage returned in the same way, repeatedly bringing him to the verge of death. By keeping him on very restricted diet for some months these attacks diminished; the pulmonary symptoms subsided, he resumed work, and was in fair health a year ago, and is so, I believe, at the present time. In both these cases there can, I think, be little doubt that the hæmorrhage arose from pulmonary aneurism. Another characteristic point about these hæmorrhages—which must, however, be taken with other symptoms—is, that no elevation of temperature precedes or attends them. The temperature is commonly reduced by the shock of the hæmorrhage, and sometimes it may rise after three or four days from secondary inflammation of the lungs or bronchi, set up by the inhaled blood. But as a rule these cases are not attended by fever, and therefore differ from the more usual hæmoptysis occurring at the earlier periods of phthisis, or when, in the later stages, due to fresh outbreaks of the disease.

The prognosis of hæmoptysis from cavities is of course always very grave, and the more quietly things have been going on previously the more guarded must our prognosis be, for these are just the cases in which such hæmorrhage may most likely be due to an aneurism.

The treatment is such as would be dictated by common sense. The most absolute rest in bed is imperative. Beware of the brandy-bottle. The first thing the friends of the patient naturally do when they find him faint from hæmorrhage is to give him brandy. But this moment of faintness is just the period at which there is the opportunity for the hæmorrhage to become staunched by the formation of a coagulum, and so long as the pulse does not absolutely fail, we should withhold stimulants, and avoid them throughout the treatment of the case. We can scarcely expect drugs to do much in such cases as these. Ergot in full doses and turpentine have been found most useful at this hospital. The momentary application of an ice-bag to the chest or between the shoulders appears sometimes to be useful. When the shock is great, opium will best relieve it. After a day or two, if the exhaustion and anæmia be great, an astringent form of iron is often of great value, as the iron alum or the pernitrate of iron, but the effect of these remedies must be closely watched. In cases in which there is a tendency to recurrence of the hæmoptysis, such patients usually making blood fast, the diet should be carefully restricted principally to fish and farinaceous food, without stimulants.

[1] Pathological Transactions, 1874.

[2] This patient has just applied (Jan. 1877) for a third admission to the hospital.

ON THE

LIMITATION OF FLUID IN THE FOOD AS AN AID TO THE TREATMENT OF SEROUS EFFUSIONS.

BY W. B. CHEADLE, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET; SENIOR ASSISTANT-PHYSICIAN TO ST. MARY'S HOSPITAL.

(*Continued from p. 760.*)

CASE 2. *Pleurisy with effusion.*—William H——, aged seven years and a half, was admitted into the hospital in Great Ormond-street on Oct. 27th, 1876. He had been suffering from sharp pain in the right side for fourteen days, with fever, thirst, and dry cough. Physical examination of the chest showed absolute dulness over the whole of the right side of the thorax below the third interspace in front, and the middle of the scapula behind, with absence of vocal vibration, and distant respiration hardly audible. The heart's apex was displaced half an inch to the left of the left nipple;—the signs, in short, of pleurisy, with effusion filling two-thirds of the right cavity.

On Oct. 28th, the day after admission, systematic treatment was commenced by limiting the quantity of drink to ten ounces of milk with ordinary meat diet, and the administration of a purge of three grains of calomel with six of compound jalap powder.

On Nov. 1st, four days later, the improvement in the physical signs was very decided. Absolute dulness had fallen to the level of the sixth space in front, and the inferior angle of the scapula behind, and the respiratory sounds were more distinct. A pill of squill, digitalis, and mercury was ordered every six hours, and the allowance of drink further reduced to seven ounces.

On Nov. 4th, the level of absolute dulness had fallen to the eighth rib. The drink was reduced still further to five ounces, the restriction not having caused any serious discomfort. The little thirst complained of was sufficiently relieved by a few acid drops.

On Nov. 8th, four days later, and twelve since treatment was commenced, all signs of effusion had disappeared. The right side of the chest was fairly resonant to the extreme base; respiratory sounds were audible there, with a loud friction-sound in the lower subaxillary region. The restriction to five ounces of fluid was, however, maintained three days longer, when the quantity was raised to twenty ounces.

On the 23rd, the patient was transferred to the Convalescent Hospital, with only some slight deficiency of breath-sound and resonance remaining.

TABLES SHOWING THE TREATMENT PURSUED AND THE RELATION BETWEEN THE AMOUNT OF FLUID TAKEN IN AS DRINK, AND THE QUANTITY EXCRETED BY THE URINE, IN THE CASE OF WILLIAM H——.

I.—*First period of three days. Amount of drink restricted to ten ounces = 283 cc. A purge of calomel and jalap the only medicine given. This acted freely. Subsequently the bowels were open regularly once a day in the normal manner.*

Date.	Cubic centimetres of fluid taken during preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
October 29th	283	Not estimated
„ 30th	283	160
„ 31st	283	265

Average daily quantity of urine passed for two days on 283 cc. of drink = 212 cc. Average daily excess of inflow by drink over outflow by urine = 71 cc.

II.—*Second period, comprising three days. Drink reduced to seven ounces = 198·1 cc. Drugs given: a pill containing half a grain of digitalis powder, a grain and a half of squill powder, and a grain and a half of mercury pill, every six hours. Bowels open once daily.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 1st	198·1	135
„ 2nd	198·1	350
„ 3rd	198·1	440

Average daily quantity of urine passed for three days on 198·1 cc. of drink = 308·3 cc. Average daily excess of outflow by urine over inflow by drink = 110·2 cc.

III.—*Third period, comprising four days. Drink still further reduced to five ounces = 141·5 cc. Drugs given: the digitalis pill, continued as before. Bowels open once daily.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 4th	141·5	330
„ 5th	141·5	290
„ 6th	141·5	275
„ 7th	141·5	320

Average daily quantity of urine passed for four days on 141·5 cc. of drink = 305 cc. Average daily excess of outflow by urine over inflow by drink = 163·5 cc.

IV.—*Fourth period, comprising three days. Fluid limited to five ounces + nine drachms of mixture = 173·3 cc. Drugs given: a mixture containing one drachm of infusion of digitalis, five minims of tincture of perchloride of iron, and two drachms of water three times a day, instead of the pill given previously. Bowels open once a day.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 8th	173·3	300
„ 9th	173·3	330
„ 10th	173·3	375

Average daily quantity of urine passed for three days on 173·3 cc. of drink = 335 cc. Average daily excess of outflow by urine over inflow by drink = 161·7 cc.

V.—*Fifth period, comprising seven days. Fluid increased to twenty ounces + nine drachms of mixture = 597·8 cc. Drugs given: the mixture as before, with one grain of quinine added to each dose, and on Nov. 15th, three grains of calomel as a purge Bowels open regularly, except on the 14th, and twice on the 16th, after the powder.*

Date.	Cubic centimetres of fluid taken in preceding 24 hours.	Cubic centimetres of urine passed in preceding 24 hours.
November 11th	597·8	350
„ 12th	597·8	340
„ 13th	597·8	300
„ 14th	597·8	500
„ 15th	597·8	550
„ 16th	597·8	500
„ 17th	597·8	300

Average daily quantity of urine passed for seven days on 597·8 cc. of drink = 391·4 cc. Average daily excess of inflow by drink over outflow by urine = 206·4 cc.

In this case again recovery was extremely rapid, the fluid having entirely disappeared by the twelfth day. As will be seen from the table, on the second and third days after the drink was limited to 283 cc. the quantity of urine was 160 and 265 cc. respectively, or on an average 212·6 cc.; being 70 cc. less than the inflow, as compared with the minimum of 200 cc. less under normal conditions. The fluid swallowed was then reduced to 7 oz. = 198 cc.; and the digitalis, squill, and mercury pill given. The following day the urine fell to 135 cc., the lowest at any period; but it immediately rose again to 350 cc., and then to 440 cc.: the average, with 198 cc. of drink, being 308·3 cc., or an average excess of outflow over inflow of 110·2 cc., as compared with 70 cc. excess of inflow over outflow on 283 cc. of drink, and with the normal minimum of 200 cc. excess of inflow over outflow. Moreover, the average gross outflow (308 cc.) exceeded the average gross outflow when the larger amount of 283 cc. of drink was allowed; and this may, I think, be fairly attributed to the action of the diuretic. The fluid swallowed was now still further reduced to 5 oz. = 141·5 cc. The urine, as before, fell next day below the quantity of the day previous, being 330 cc. instead of 440 cc. The average gross outflow showed, however, only very slight diminution, being, for the four days on which 141·5 cc. were taken, 305 cc., as compared with 308 cc. on the larger amount of 198 cc. of drink. The average *excess* of outflow over inflow was therefore increased; being 163·5 cc., as compared with 110 cc., or a gain of 53·5 cc. on the smaller amount of drink, and with 200 cc. excess of inflow over outflow in the normal condition. The fluid taken being now increased by 9 dr. mixture to 173·3 cc., the gross quantity of urine showed a slight gradual increase, the average for the three days this was continued being 335 cc. The excess of outflow over inflow was hardly affected by the change, being 161·7 cc., as compared with the previous average of 163·5 cc., and with 200 cc. excess of inflow over outflow in the normal condition. Drink was now increased to 20 oz milk + 9 dr. mixture = 597·8 cc. The gross quantity of urine rose a little, the average for seven days being 391·8 cc. Instead, however, of the outflow exceeding the inflow, the relation was now reversed, and there was an excess of inflow over outflow, on an average, of 206 cc.; a little more than the normal amount, and showing an average daily loss in the balance between the two—i. e., of drainage power—of upwards of 360 cc.

Throughout, then, the excess of outflow by urine over inflow by drink—i.e., the drainage of fluid by urine—was always greater than under ordinary conditions, and greatest when the drink was restricted to the smallest amount—viz., five ounces. If, as in the former case, the actual amount of water contained in the fluids consumed and excreted be taken instead of the gross amount of fluid, and if, further, the quantity taken in solid food be added, on the one hand, and the amount excreted by the skin, lungs, and bowels be added, on the other, the excess of excretion over ingestion becomes still more marked. It is hardly necessary, however, to follow this out in detail, since, as we have seen, a

rough comparison between fluid drunk and urine excreted shows, with sufficient correctness, the general relation between the inflow and outflow under the existing conditions.

(To be continued.)

A LARGE ABSCESS OF THE LIVER SATISFACTORILY TREATED WITH THE PNEUMATIC ASPIRATOR.

BY JAMES B. BALL, M.D. LOND.

AN important contribution by Surg.-Major Condon on the use of the Pneumatic Aspirator in Hepatic Abscess appeared in THE LANCET of Aug. 25th and Sept. 1st. Twelve cases were recorded in which the liver was punctured. It may be said that in all these cases the operation was productive of some good; for even in those which ultimately proved fatal, temporary relief was mostly afforded, and the fatal result was consequent either on the existence of an abscess which had not been reached by the needle, or on the almost moribund condition of the patient at the time when the operation was resorted to. In four of the twelve cases it appeared that no abscess existed, but they are none the less interesting, as showing the security with which the liver may be explored in search of a suspected abscess, and also the immediate, and indeed permanent, relief of pain and other symptoms afforded in such cases by the puncture. In two cases complete recovery followed the evacuation of the contents of the abscess by the aspirator. In both these cases the abscess was small. The following case is remarkable for the large size of the abscess, thirty-nine ounces of pus having been drawn off on the first occasion, and from the apparently complete recovery which has followed a second use of the aspirator. It is obvious from the amount of pus withdrawn that the patient was in imminent peril when Dr. Ralfe first saw him and recommended the operation. A little further delay might have proved fatal. In placing this case side by side with those of Surgeon-Major Condon, it is to be noted that while all his cases were treated in India, this case was treated in England, and doubtless owed its favourable progress in no small measure to the advantage of the climate.

The following is a summary of the notes of the case:—

W. H——, aged forty-one; had always enjoyed good health. He went to Burmah in 1860. He there held a public appointment, the duties of which were of an active nature, necessitating frequent journeys in the interior, and exposure to the sun. He continued in good health, suffering occasionally from a slight "bilious attack," which never laid him up, until August, 1870, when he was attacked with jungle fever. He had three attacks at monthly intervals, each attack lasting three or four days. He got into a weak state of health, and was invalided home. He arrived in England in February, 1871. He remained at home two years, and during that time he suffered from occasional pains in the right shoulder, which he attributed to rheumatism. His health was quite restored, and he returned to Burmah in December, 1872. About a month after his return (in the beginning of 1873), he was laid up with an attack of liver complaint, the symptoms of which were severe pain and tenderness in the liver region, fever, and night-sweats. He recovered, however, after being laid up three weeks or a month, and was able to resume his duties, which he continued to perform till May last, suffering occasionally from attacks of pain and tenderness in the right side, accompanied by night-sweats, for which he would have to lie up for three or four days at a time. He suffered also a good deal from flatulence and dyspepsia. Last January he had a fall from a hammock, which was followed by severe pain in the liver region. From that time till he left for England in May he was scarcely ever free from pain in this part. He also felt during all this latter period constantly languid and depressed in spirits; he lost flesh considerably, and had frequent night-sweats. He was invalided in May, and arrived in England the latter end of June. During all the period of his residence in India his habits were strictly temperate.

He came under my observation on July 10th, having taken up his residence in the south of London. His state at that time was as follows:—Thin. Complexion very sallow, slight icteric tint of sclerotic. Tongue clean. Appetite fairly good. Has a short dry cough. Breath-sounds healthy over left chest; on the right side very weak below angle of scapula behind. Heart's apex beat in normal position; sounds healthy. The right hypochondriac region is more prominent than the left; there is a marked sense of resistance to the hand placed on that region. Absolute dulness commences on the right side in front in the fifth interspace, in the axilla on the seventh rib, at the back on the tenth rib. There is no dulness below the costal margin. I cannot feel the liver below the ribs. There is a very tender spot in the epigastrium to the right of the middle line, and another almost equally tender point in the axilla in the eighth interspace. There is slight œdema of the skin over the fifth interspace outside the nipple line. He has occasional shooting pains in the epigastric and right hypochondriac regions. Laughing and coughing cause sharp pain in the same parts. Urine free from albumen and bile-pigment. He has been very well since his arrival in England, except for some pain in his side, till the last couple of days, during which he has felt very tired and languid, and hot towards evening, and has sweated a great deal at night. This afternoon (July 10th) he had a slight rigor. Temperature, 9 P.M., 101·5°; pulse 104.

July 11th.—10 A.M.: Temperature 99°. Sweated profusely last night. Ordered fifteen grains of quinine daily, in two doses.—10 P.M.: Temperature 100·4°.

16th.—No further rigor. Night-sweats continue profuse. Morning temperature normal each day since 11th; evening temperature has ranged between 99° and 100°. The pain has been rather more frequent and severe, otherwise the local signs and symptoms continue as before. Dr. Murchison saw him to-day. He had no doubt as to the existence of abscess of the liver. He thought an abscess had probably existed since the first attack of hepatitis in 1873. He recommended rest, quinine in full doses, and such local or general anodynes as might seem necessary. He did not advise immediate operative interference, but he considered an operation would be advisable if the pain and fever persisted and threatened to wear him out. He had a slight rigor this evening at 6 P.M. He unfortunately got a little wet this morning when returning from seeing Dr. Murchison. Temperature at 9 P.M., 100 8°; pulse 96.

26th.—Morning temperature, since July 17th, usually normal; evening temperature between 100° and 102°. Night-sweating continues unabated. There has been more pain in the liver region. He describes it as shooting from the epigastrium back to the right shoulder. There is a good deal of tenderness in the epigastrium and in the fifth and sixth interspaces, a little outside the nipple line, also in the seventh and eight interspaces in the axilla. The œdema, formerly noticed, has disappeared. His cough is very troublesome, especially when he lies down at night. His appetite continues very fair. He remains in-doors, but gets up every day, and moves about the house. He keeps to very plain diet, and takes no stimulant, except, sometimes, a little hock or claret with meals. Has taken five grains of quinine twice daily since July 16th. An application, composed of extract of belladonna and glycerine, has been used constantly for the pain in the side.

August 20th.—Since last note the evening temperature has ranged between 100° and 102°; the morning temperature has been normal. The pain has steadily increased, and for the last fortnight it has been chiefly felt in the lower part of right back. It occurs in paroxysms, lasting a few hours, and is of a shooting and stabbing character. The paroxysms occur mostly in the evening and last through the early part of the night. In the morning he is often quite free from pain. He has taken opium in gradually increased doses. For the last few days he has had most agonising paroxysms of pain. The night-sweats persist, but are less than formerly. The cough scarcely troubles him at all now. Appetite capricious, but he generally takes one good meal a day. He has taken ten or fifteen grains of quinine a day since July 26th. He has had some small blisters applied to the tender parts. The lymphatic glands in the axillæ and groins are felt enlarged and hard. The line of absolute hepatic dulness is still at the lower border of the fifth rib in front and at the upper border of the

seventh in the axilla; but at the back it now reaches the upper border of the ninth rib, and there is partial dulness to the angle of the scapula. The ribs over the hepatic region scarcely move with respiration. The heart's apex is not displaced. The most tender points are still in the epigastrium and in the eighth interspace in the axilla. There is decided tenderness below the twelfth rib behind. There is no appearance of pointing on the surface; in fact, the œdema which was formerly noticed has disappeared. I asked Dr. Ralfe, of the Seamen's Hospital, to see him to-day, as Dr. Murchison was absent from town. Dr. Ralfe, thinking the time indicated by Dr. Murchison for operative interference had arrived, recommended the aspirator to be used to relieve him. The patient rather objected to the operation, and preferred to wait a few days and see how he got on.

22nd.—As the paroxysms of pain had been very severe and frequent, the patient agreed to the operation. As he was rather nervous, he was placed under the influence of ether, and Dr. Ralfe indicated a point in the eighth interspace at the back part of the axilla, three inches and a half below and four inches and a half outside the nipple, for the introduction of the needle. A No. 3 needle was inserted at this point to a depth of two inches and a quarter, and in a somewhat forward direction. About three-quarters of an inch after insertion a feeling was experienced of the needle having entered a cavity. On aspiration, pus immediately made its appearance. At first it was of a chocolate colour, but after six or seven fills of the instrument it assumed a redder tinge. When the pus began to come slowly, slight movement of the point of the needle caused it to come more freely. Ultimately, as the pus came very slowly, and evidently mixed with much blood, the needle was withdrawn. The total quantity of matter drawn off was thirty-nine ounces. It was perfectly free from offensive smell. A broad bandage was applied round the body, and two grains of opium administered.—9 P.M.: Temperature 98·4°; pulse 82; free from pain.

23rd.—10 A.M.: Temperature 97·6°; pulse 92. Slept well; no pain; some tenderness in the old places, but less than before the operation. Dulness has fallen in axilla to the eighth rib, and behind to the ninth interspace. Can draw a breath more freely. Is troubled with flatulent distension of the abdomen. Evening temperature 98·8°.

Sept. 1st.—The pain and tenderness have gradually returned. The last couple of days he has had severe paroxysms of pain. The evening temperature has risen to above 100°, and the night-sweats continue. Dr. Ralfe saw him to-day, and recommended a further operation. It was decided to introduce a trocar, and put a drainage-tube in. The patient thought he could bear the operation without an anæsthetic. A medium-sized trocar, smeared with carbolised oil, was inserted in the eighth interspace, just in front of the former seat of puncture, in a somewhat forward direction. It was inserted to its full extent. The abscess was, however, missed, owing probably to its having receded in position since the evacuation of its contents. Nothing but a few drops of blood escaped. The trocar was withdrawn, and a pad of lint applied to the wound. Three grains of opium were administered. In the evening he was free from pain.

On the following day he was almost free from pain and tenderness, and felt on the whole relieved by the puncture. He could draw a long breath more freely. His abdomen was much distended with flatulence, but was not tender. Evening temperature 101·8°.

5th.—Dr. Ralfe saw him again to-day. The pain having gradually returned, and the evening exacerbations of fever continuing, we decided to aspirate, and then, if it seemed desirable, to introduce a trocar and drainage-tube. Chloroform, followed by ether, was administered. No. 3 needle was again used. It was introduced close to the seat of the first puncture, and in a forward direction. On aspiration no pus came. The needle was partly withdrawn and reintroduced in a backward direction, when it was felt free in a cavity, and pus came. It was of a deep chocolate-brown colour, very thick, and came slowly. When twelve and a half ounces had been drawn off, as the matter came very slowly, the needle was taken out. After standing a little while the matter withdrawn coagulated into a solid clot, the consistence of blood-clot.—10 P.M.: Temperature 97·3°; pulse 80. Is free from pain.

6th.—Had slight pain in the side during the early part of the night. This morning has no pain. Can draw a long breath freely. In front the dulness has fallen to the sixth cartilage. In the axilla there is no absolute dulness whatever, only partial dulness on the eighth rib and eighth space. At the back there is partial dulness on ninth rib, becoming absolute at the lower border of the tenth rib. Suffers a good deal from flatulent distension. Temperature normal morning and evening.

11th.—He is still quite free from pain. Has no night-sweats. Temperature has continued normal. He can draw a long breath, cough, and sneeze without pain. He says he can laugh more freely than he has done for years. Feels in capital spirits; eats heartily. Has begun to take cod-liver oil. From this time he continued to gain flesh and strength. He occasionally had an uneasy feeling in his right side, not amounting to actual pain. The epigastric tenderness has completely disappeared. Very deep pressure in the eighth space in the axilla caused slight pain, but not enough to make him flinch. On October 14th and the two following days he had a little pain in the side, and the evening temperature rose to a little above 99°. It was feared the mischief was returning, but the symptoms passed off, and the temperature resumed its normal condition. His weight on September 16th was 8st. 10lb., on October 2nd 9st. 11lb., on October 30th 9st. 6lb. He says his natural weight is about 9st. 8lb.

At the present date (November 2nd) he seems in perfect health. He says he sometimes feels a little uneasy sensation about the lower part of the right back, but never amounting to actual pain. He can laugh, cough, and draw a deep breath without any of the catching pain which he had felt more or less for the last four years. There is absolutely no tenderness at any part of the liver region. The liver dulness begins on the sixth rib in front, on the eighth in the axilla, and on the eleventh behind. The right lower ribs move freely with respiration. The appearance of the two sides is symmetrical. The breath-sounds are heard over the normal area on the right side. The enlargement of the lymphatic glands, which had been noticed in the axillæ and groins, has subsided. His appetite is good. He suffers much less from dyspepsia and flatulence than he has for a long time. He takes cod-liver oil and three grains of quinine daily.

Loughborough-road, Brixton.

ON THE NUMERATION OF BLOOD-CORPUSCLES.

BY W. R. GOWERS, M.D.,
ASSISTANT PROFESSOR OF CLINICAL MEDICINE IN UNIVERSITY COLLEGE.

THE richness or poverty of the blood in corpuscles can only be ascertained by directly counting the number of corpuscles in a given volume of the blood. It is only by this means that variations in their number—an important element in all conditions of anæmia—can be with accuracy ascertained or stated, and it is thus that the relative numbers of the red and white corpuscles can be best determined. The method is not only an important addition to our means of clinical accuracy; it is an extension of our field of observation which will probably lead to important additions to our knowledge of the pathology of the blood. As an illustration, I may mention the recent observations of Meunier on the relation between the number of corpuscles in the blood and the excretion of urea during convalescence from acute diseases.

The method, although it has been largely employed in France, and also in Germany, is almost unknown in clinical work in this country. The only observations which, as far as I am aware, have been published here, are a series on the blood in albuminuria by Dr. Dickinson. One reason for this is, doubtless, that no instruments for the purpose have been made in this country, and that those hitherto made abroad have the inconvenience that they can be employed only with one microscope, and with an eyepiece made specially for the work.

It is perhaps necessary to explain that the principle of

the proceeding is, in all cases, that which was devised a quarter of a century ago by Vierordt, and consists in making a definite dilution of a measured quantity of the blood, and counting the number of corpuscles contained in a certain volume of that dilution. Several modifications of the process have been made, relating especially to the latter part of the process. Vierordt drew uniform lines of the diluted blood along a glass slide, and, after drying, counted the corpuscles in a given extent of those lines. Cramer substituted for this what may be termed a capillary cell, and in the better known methods of Potain and Malassez a capillary tube is employed. Hayem and Nachet have improved upon this by employing a cell of a certain depth. In each case the area of the tube or cell in which the corpuscles are counted is determined by the method devised by Cramer of employing a "quadrilled ocular"—i.e., an eyepiece micrometer, ruled in squares, the value of which for the microscope used is definitely known.

In order to remedy the inconveniences of this method, a modification of Hayem's instrument has been made, according to my directions, by Mr. Hawksley, of 300, Oxford-street, which can be used with any microscope, and by which somewhat greater accuracy can be secured in the operation. In it tenth-of-a-millimetre squares are ruled on the glass slide at the bottom of the cell. When the corpuscles have subsided to the bottom of the cell, they are seen lying in the divisions, and the number in each can be counted with perfect facility. In the French instrument, a little fluid has to be placed in the glass cell to secure the covering-glass. This I have found objectionable, because the amount of fluid influences the closeness with which the covering glass rests on the cell and the consequent depth of the cell. To obviate this source of error, the slide has been placed on a metal slip to which two springs are attached; these rest on the edges of the covering-glass, and keep it in position with a pressure which is always uniform. The other parts of the instrument, for measuring and mixing the blood and the diluting fluid, are on the same plan as in the instrument of Hayem and Nachet. But by employing a dilution (1 in 200) which is somewhat different from that which they employ (1 in 251), the process of ascertaining and also of stating the corpuscular richness of the blood is much simplified.

The hæmacytometer consists of—(1) A small pipette, holding exactly 995 cubic millimetres. (2) A fine capillary tube, holding five cubic millimetres. (3) A small glass jar, in which the dilution is made. (4) The cell, above-mentioned, exactly $\frac{1}{10}$th of a millimetre deep, the floor of which is ruled in tenth of a millimetre squares. Various diluting solutions have been recommended in order to change as little as possible the aspect of the corpuscles. It is not well, however, to endeavour to observe the characters of the corpuscles during the numeration. Whatever solution is employed the corpuscles are, more or less, changed by it. One which answers very well is a solution of sulphate of soda of a specific gravity of 1025.

The mode of proceeding is extremely simple. A pipetteful of the solution is placed in the mixing vessel. Five cubic millimetres of blood are then drawn into the capillary tube from a drop in the finger, and then blown out into the solution. The two are well mixed by a glass rod; a drop of the dilution is placed in the centre of the cell, the covering-glass applied and secured by the springs, and the slide placed on the stage of the microscope. The lens is then focused to the squares. In a few minutes the corpuscles have sunk on to the squares. The number in ten squares is then counted, and this, multipled by 10,000, gives the number in a cubic millimetre of blood. The average of healthy blood was decided by Vierordt and Welcker to be 5,000,000 per cubic millimetre, and later results agree with this sufficiently nearly to justify the adoption of this number as the standard, it being remembered that in a healthy adult man the number may be a little higher, in a woman a little lower. The number per cubic millimetre is the common mode of stating the corpuscular richness of the blood. But by employing this dilution, and squares of this size, a much more convenient mode of statement is obtained. Taking five millions as the average per cubic millimetre in healthy blood, the average number in two squares of the cell is 100. The number in two squares (ascertained by counting a larger number, ten or twenty, and taking the mean) thus expresses the percentage proportion of the corpuscles to that of health, or, made into a two-place decimal, the proportion which the corpuscular richness of the blood examined bears to healthy blood taken as unity, or the number in twenty squares may be taken as a three-place decimal. This is a much more simple process than that of Hayem.

For instance, in a case of lymphadenoma with moderate apparent anæmia, it was found that ten squares contained 355 corpuscles, equal to 3,550,000 per cubic millimetre of blood. The average of two squares (71) is the percentage, and thus the corpuscular richness is ·71.

In the proceeding one or two precautions are necessary to ensure accuracy. The blood, as Hayem suggests, should be obtained by a puncture with the point of a lancet, sufficient to permit the escape of a drop without much pressure. If the finger is much squeezed or pressed, the relative amount of serum and corpuscles is affected. It is somewhat difficult to get the exact quantity of blood in the capillary tube, because, in removing the blood from the point, a little is easily drawn out of the tube. It is therefore best to draw rather more than the required quantity into the tube, then to remove the blood from the point with a soft cloth, and keep the cloth in contact with the point while the extra blood is blown out of the tube. A little of the diluting fluid should be drawn into the tube after the blood is ejected, to ensure the removal of all the corpuscles. The drop placed in the cell should not come in contact with the sides of the cell. It must of course be in contact with the cover-glass. The corpuscles should be counted in or near the centre of the drop. In distinguishing the red from the white corpuscles, it must be remembered that a weak diluting solution causes many corpuscles to swell up to twice the size of the others, and care is needed to distinguish these from the white cells. A quarter-inch objective is the most convenient to employ. The whole process, from beginning to end, does not occupy more than a quarter of an hour.

As instances of its use the following may be cited. In a case of anæmia from lead-poisoning the number was found to be only 3,020,000 per cubic millimetre, equal to 60 per cent. (·604 of the normal quantity). In a case of chlorosis the number was only 3,320,000, giving a percentage of 66 (a proportion of ·662). In another case of chlorosis the number was only 2,830,000 per cubic millimetre, giving a percentage of 56 (a proportion to health of ·56). In a man with great, apparently idiopathic, anæmia the number was as low as 1,650,000, giving a percentage of only 33.

It may be asked—Is a process in which so large a dilution is employed, as is necessarily the case in the numeration of blood-corpuscles, one of sufficient accuracy to render it really useful? A certain amount of error must be admitted, but I think that the following example shows that the accuracy obtainable is sufficient to give reasonable value to the results obtained. I made three careful consecutive observations on the blood of the same individual, taking a fresh drop on each occasion, and taking the average of twenty squares each time. The percentages obtained were respectively 83, 87, and 84, giving a mean of nearly 85, from which the extreme variations were less than 3 per cent. In the case of idiopathic anæmia mentioned above, two separate dilutions gave 1,640,000 and 1,660,000 corpuscles per cubic millimetre, the proportion to normal blood being respectively ·328 and ·332—a very slight variation. A greater diversity than these would still be less than Sörensen found to be unavoidable with Malassez's instrument.

Queen Anne-street, W.

CONNEXION OF EXOPHTHALMIC GOITRE WITH MANIA.

BY LEONARD CANE, M.D. AND B.S. LOND.,
CONSULTING SURGEON TO PETERBOROUGH INFIRMARY.

IN THE LANCET of Nov. 17th, a case of mania associated with exophthalmic goitre is reported by Dr. Rhys Williams, of Bethlem Hospital, and the notes of the following case, in many respects similar, though less complete in its history, bears upon the subject. The peculiar irritability and mobility of temper which not unfrequently accompanies this disease has been noticed by Trousseau.[1] He

[1] Lectures on Clinical Medicine.

remarks that "The patient's temper is so altered that the persons about her can scarcely put up with her irritability, her want of grateful feelings, and her exacting ways. I have known a young lady, who was usually of a sweet disposition, become disrespectful and quick-tempered, almost violent; besides this change of temper there is sleeplessness; patient feels prefectly weary, and yet cannot rest for a moment." Then, again, in the case of Miss X——, he states, "Her temper became irritable. There was at times such a degree of nervous excitement that insanity was dreaded." Trousseau also mentions a case where exophthalmic goitre was apparently the result of deep mental emotion, coming on within a very short period. The case is narrated thus: "A woman, aged sixty years, is admitted into St. Bernard ward on July 3rd, 1863, suffering from highly-marked exophthalmos, and with the following history. In 1856, seven years previously, she lost her father, whom she had attended at the cost of great fatigue. This loss caused her very deep grief. One night, after she had been crying for a long time, she suddenly felt her eyes swell and lift up her eyelids, her thyroid gland increase notably in size and throb in an unusual manner. She had at the same time violent palpitation of the heart. Simultaneously with the development of this train of symptoms, she bled violently at the nose throughout the night. Four days after this she consulted M. Desmarres, who recognised exophthalmic cachexia."

After quoting the above from Trousseau, to show that the connexion between mental disorder and exophthalmic goitre was noticed by him, I will proceed to give the notes of a case coming under my care where the peculiar irritability &c. passed on into actual insanity.

Mrs. P——, widow, aged forty-two, formerly kept a small village school. Her husband had died about a year before she came under treatment of "cancer" (?). She had had considerable trouble and anxiety, and after her husband's death she became very excitable, irritable, and at times despondent. She sent for me in July, 1876, and I found her suffering unmistakably from exophthalmic goitre. Her eyeballs projected to a very marked extent, rolling about in all directions. She could not completely shut the eyelids without making considerable effort. The thyroid gland was much enlarged, and pulsated freely, as did the vessels of the neck. The voice was high-pitched, but weak. She complained much of palpitation of the heart, which she said was so violent that she could not sleep. She was very excitable and sharp-tempered, and was reported besides to have strong erotic feelings, believing various people to be in love with her, and annoying those people with her attentions. In her immediate relations there was no history of insanity, parents, several brothers and sisters, being all apparently free from any neurotic affections. One aunt committed suicide whilst in an unsound state of mind. I at once prescribed some belladonna, and ordered her good but moderate diet, milk, meat, broth, &c., but no stimulants. Under this treatment she gradually improved, the palpitation became less distressing, and the mental excitement was not so great.

Unfortunately, she was shortly after attacked by a low form of fever, which lasted for several weeks, resembling typhoid in most of its symptoms, with persistent and very troublesome diarrhœa, and an evening temperature which did not exceed 102° F. This left her very weak, but the exophthalmic symptoms were still better than before I saw her. About Christmas, 1876, it was noticed that she became melancholic, with violent outbursts of temper. She attempted on one occasion to get out of a window in her night-dress, and on several occasions threatened to commit suicide. She had delusions about the devil &c. Finding her quite unmanageable, she was sent to an asylum. After she had been there for about six months she was discharged as convalescent.

For a short time she had no treatment, but the palpitation, exophthalmos, &c., becoming very troublesome, she applied to the infirmary, where she came under the care of Dr. T. J. Walker. He prescribed a mixture of iron and strychnia.

In the course of a few days an urgent message was sent me to see the patient. The statements of the patient's friends were that she was convulsed, as "stiff as a board," and seemed out of her mind. On inquiry if she had taken anything, it was elicited that she had received a large bottle of medicine from the infirmary, and had taken about half of it. On inquiry it was found that the bottle contained nearly two drachms of solution of strychnine, of which she had probably taken one-third. She had vomited, and after some hours the twitching of the muscles and the rigidity of the body passed off.

From this time her mental condition gradually got worse. She became violent, dirty, and unmanageable, and she was again sent to an asylum, where she now remains.

The exophthalmic goitre was in about the same condition when she was removed.

Peterborough.

CONCUSSION OF THE BRAIN, FOLLOWED BY PARALYSIS OF THE THIRD CRANIAL NERVE.

BY JAMES MORE, M.D.

(*Concluded from page 763.*)

IN analysing the before-mentioned anomalies in C——'s vision, it is interesting to notice the part played by the different muscles, both within and without the orbit. The double vision experienced when looking straight before him might be accounted for by the paresis of the ciliary muscle interfering with positive accommodation in the right eye; it being merely a question of traumatic hypermetropia in the latter, the false image disappeared when the object was withdrawn six or eight inches from the eye. No doubt we might also suppose that, as the inferior oblique was in a state of paresis, the over-action of the superior oblique would tend to make the image change its place *circularly* in the retina. The double images seen on *looking to the left* depends on a more complicated mechanism. Cases are recorded by Sir Charles Bell[1] where this has been caused by paralysis of the left external rectus, which we know is supplied by the sixth cranial nerve. But such cannot be the explanation in C——'s case, because, on looking to the right, one image only is seen, nor is there the slightest squinting of the left eye; and, besides, in the dilatation of pupil and ptosis of right eye we have anatomical proof, so to speak, that the paresis is in the motor oculi, or third nerve. In binocular vision an accurate co-ordination in the muscles of the orbit is necessary before we can have a correct *axial* convergence of both optic globes. "The eyes," in the words of Professor Struthers,[2] "are bound to each other in their motions, in order that the convergence of the axis to a greater or less degree shall never be destroyed; so that when the eyes are moved sideways a non-corresponding muscle must be employed." Now, I may just observe, without further remark, that both right inferior oblique and right internal rectus, being supplied by the motor oculi, are presumably in a state of paresis, and are the non-corresponding muscles brought into play with the left superior oblique and left external rectus, when the head is inclined over to the left.

Again, we saw that when the object was brought down *below the level of the eyes* C—— always saw double, the images getting wider apart the lower the object was placed. In this anomaly of vision we must take into account the weakened state of the right inferior rectus, not forgetting the part played in this movement by the right inferior oblique; for it is believed that the latter muscle, besides rotating the eyeball on its antero-posterior axis, is employed also in slightly altering the direction of its axis, especially when looking up or down. If this is so, we can understand why paresis of this muscle should cause "double vision with widely separated images, unless its antagonist on the same side is in action." It is also possible that paresis of the right internal rectus might aggravate matters, for, by its *conjoined* action with the right inferior rectus, it tends to turn the cornea inwards and downwards. It will be remembered that the right cornea did seem somewhat lower than the left.

[1] The Nervous System (1844), p. 389.

[2] See Prof. Struthers' interesting papers on the Nerves of the Orbit, in "Anatomical and Physiological Observations," 1854.

The explanation of the double images always disappearing when the object was *raised above the level of the eyes*, is, of course, given in the fact that though the superior rectus of the right eye was deficient in power, it being a corresponding muscle, the left superior rectus, if not of itself sufficient to direct the upward movements of the eyes, would undoubtedly be so when aided by the right external and left internal recti, the conjoined action of which, we are told, turns the eyes upwards and outwards.

One point of special interest in C——'s case was the existence and persistence of the giddiness, which, very intense at first, diminished *pari passu* with the other symptoms indicating paralysis of the third nerve. From the writings and experimental researches of McKendrick, Ferrier, Cayrade, Goltz, and more recently of Kohts,[3] it would seem that the corpora quadrigemina, besides their recognised function of co-ordinating visual impressions with the motor apparatus of the organs of vision, have likewise the function of maintaining the equilibrium of the body. C——, especially in the earlier stages of his illness, suffered intensely from giddiness, and that of a peculiar and special character. He felt and walked like a drunken man. His head drooped forward and was turned to the left. When walking, he had a tendency to run forwards and to fall to *the right*. He saw the ground "all in heaps," all objects in motion and double; and, with his arms stretched out, he looked like one walking in the dark. After a time the idea of constant motion left him, and his vision so much improved that he could walk with his hands in his pockets. Up to a late date of his illness a tendency to fall was experienced when turning to the right; but, strange to say, though all objects on the ground looked more or less double when looking to the left, no such tendency was experienced when looking in that direction. His giddiness was very much increased on walking over rough ground. About six weeks ago he attempted to go down a rough railway embankment, but his vertigo was so embarrassing that the perspiration (through fear) streamed over his forehead. Everything seemed rolling under his feet in heaps, and he felt afraid to "step out," as he did not know whether he was stepping on a high or on a low piece of ground. It is curious to notice that at first *all level ground seemed* in heaps and in motion, whilst later on it was only when the ground was *actually* rough and in heaps that he felt all the distress of extreme giddiness. From the above it is evident that there was a decided loss of power in maintaining the equilibrium of the body, clinically associated with loss of power in those parts supplied by the motor oculi nerve; and with this we must be content, as we have, of course, no means of showing whether the injury was situated in the tract of the nerve itself, or in its ganglionic centre, the quadrigeminal bodies. Sir Charles Bell[4] tells us that "it is to the muscular apparatus (of the eye) and to the conclusions we are enabled to draw from the consciousness of muscular effort, that we owe that geometrical sense by which we become acquainted with the form and magnitude and distance of objects." Here the muscles of the right eye were in a state of paresis, causing defective parallelism in the two eyes, with its consequent double vision. The ideas of form, magnitude, and distance were confused, so that on walking on rough ground he could not regulate his steps. Yet beside all this there was a special vertigo (the tendency to fall to the right), which can only be accounted for by supposing that the injury was situated in or about the corpora quadrigemina.

Up to Nov. 9th C—— continued the iodide of potassium and ergot mixture, and had been repeatedly blistered behind the ears and on the nape of the neck. He was then put on cod-liver oil, containing phosphorus, quinine, and strychnia; and this seemed to act well, for from this date his improvement, though not rapid, was steady and satisfactory. At this time he saw double images only when looking *very much* to the left, and when the object was on the ground. On the 27th he says: "When I look down at my feet, they are still all of a dazzle and double. At one time the images were nine inches apart; now it takes them all their time to be three inches apart." On Dec. 11th the double images were only three-fourths of an inch apart, and the right cornea was level with the left. On the 22nd the double images joined each other.

[3] THE LANCET, Jan. 1877. [4] The Nervous System, p. 146.

Jan. 15th.—The patient's vision is so much improved that he is going to work. He tells me he can now walk along a plank on a scaffold without fear, though at times he is still slightly giddy, more especially when he makes any sudden movement. He still sees four feet, but the images *override* each other more and more every day.

29th.—Patient has been bricklaying since the 15th, and has lost the double images. He complains now only of a slight difficulty in adjusting his sight. When he places a brick, it dazzles slightly for a second or two, but this tendency is day by day disappearing, and his weakened muscles are being gradually educated back to their skilled automatism.

Rothwell, Northamptonshire.

THE RADICAL CURE OF HYDROCELE.

BY GEORGE BROWN, M.R.C.S. &c.

MR. JACOBSON'S paper "On Incision of Hydrocele Antiseptically," published in THE LANCET of Sept. 1st, will do good by directing the attention of surgeons to alternative measures for the radical cure of hydrocele which may be practised in cases where the usual treatment by injection of tincture of iodine has failed, and in those cases where, on account of the age or constitution of the patient, it would be unadvisable to adopt this mode of procedure.

Laying open of the vaginal sac of the scrotum is, however, a severe operation, and probably few patients will be found willing to submit to it if a less formidable measure can be adopted with reasonable hope of success. Happily we have such a measure in the seton, which was constantly and most successfully practised by the older surgeons, but which of late years has almost entirely fallen into disuse.

Among the advantages which may be claimed for the seton over incision are:—1. The operation is much simpler and less painful. 2. It is unattended by loss of blood or shock to the system. 3. There is less risk of suppuration or sloughing. 4. After-treatment is more simple. 5. The cure is effected more speedily. 6. No cicatrix remains. 7. An anæsthetic is unnecessary in the case of adults.

At present I have only had an opportunity of treating one case by means of the seton, and that was a case of hydrocele of the cord in a child. The result was, as will be seen from the following particulars, most satisfactory. Apart from the treatment, the case is worthy of note as showing how readily this affection may be mistaken for hernia. Here no less than three surgeons diagnosed the case to be an inguinal rupture, and treated it accordingly, much to the discomfort of the patient, and the ultimate dissatisfaction of his friends.

The patient, Charles R——, aged six years, was brought to me in November, 1875, in order that I might see whether another form of truss could be substituted for the one he was then wearing for supposed right inguinal hernia, as it did not "keep the rupture back." I ascertained that the swelling was first observed when he was four years old. At first but little notice was taken of it, but as, in a few weeks, it was evidently increasing in size, he was taken to the family doctor, who, as also another surgeon who was present, examined him, and pronounced the tumour to be a rupture. A truss was immediately procured, and worn daily for about twelve months. Meantime the swelling continued to increase in size, and as the truss did not appear to fit properly, the lad was taken to a truss society. Here the surgeon in attendance examined him, and fitted him with a larger truss, which he wore for some months, but, like the preceding one, it was quite useless as regards keeping the "rupture" back. On examination I found a fluctuating tumour an inch and a half long, and about half as wide, extending from the right external abdominal ring along the course of the spermatic cord. It could be pushed up into the inguinal canal, but *not into the abdominal cavity*. There was no impulse on coughing. That the contents of the tumour were fluid I ascertained by constricting its centre with the finger and thumb of one hand, and then pressing one extremity of the tumour with the

other. The pressure forced the fluid through the constriction to the other side of the sac, as could be felt. Of course, the truss was at once thrown aside. Discutient lotions were applied for about a month, but without reducing the size of the tumour. I then attempted to draw off the fluid with a trocar and cannula; but the child struggled so violently that I was obliged to desist. A few weeks later (January 20th, 1876,) I tapped the cyst, after administering chloroform, and drew off one ounce of slightly opalescent watery fluid. Pressure was then applied, in the hope that it would prove sufficient to effect a cure; but the cyst rapidly refilled, and in ten days was larger than before. On February 4th, chloroform having been administered, I introduced a seton, consisting of four pieces of stout ligature silk, passing the needle into the cyst at its lowest point, and bringing it out near the external abdominal ring, an inch and a half from the point of ingress. The child had a good night's rest, and next morning appeared as well as usual. The tumour was smaller, a good deal of fluid having drained away. About twenty-four hours after the introduction of the seton the child complained of pain, which caused him to pass a very restless night. Next morning I found that the tumour was considerably swollen and was very tender to the touch. As the whole internal surface was evidently in an active state of inflammation, I removed the sutures, and applied lint saturated with lead lotion. After the removal of the seton the pain quickly subsided, and in two days the child was so well that he was with difficulty kept in bed. There was still some swelling and thickening. Gentle pressure was then applied so as to keep the walls of the cyst in contact. Within a week the patient was able to get up and walk about, and at the end of a fortnight the cure was complete. When I saw the patient two months afterwards the parts were perfectly natural, and there was nothing to indicate that the boy had ever suffered from hydrocele.

In using the seton it is, I think, very important to remove the seton as soon as sufficient inflammation has been set up in the sac. If this is done, the small punctures may be expected to heal up at once without suppuration, and very little constitutional disturbance is likely to take place.

Colebrooke-row, N.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

OVARIOTOMY UNDER THE ANTISEPTIC METHOD; RECOVERY.

(Under the care of Dr. POTTER and Mr. COWELL.)

THE subjoined notes (furnished by Mr. W. J. Quicke, resident obstetrician), taken in conjunction with those of Dr. Philipson's case of ovarian cancer, describe very accurately the history of the origin, the symptoms, and course of ovarian tumours. It will be noticed that, while the symptoms in both instances were in many respects similar, there were in Dr. Philipson's case certain signs, such as enlargement of the liver and of the lymphatic glands, which created the suspicion of the presence of malignant disease. The difference between the two cases was made clear by section of the abdominal parietes. In Mr. Cowell's case the tumour was not connected with any important viscus, whereas in Dr. Philipson's case nearly the whole of the abdominal organs were involved in cancerous growth.

M. A. S——, aged thirty-eight, widow, mother of three children, aged sixteen, nine, and seven years respectively, was admitted on Feb. 7th, 1877. She had never had any miscarriages. Since the death of her husband, seven and a half years ago, she had been a laundress. Her health was always good until two years before, when she began to suffer pain in the right iliac region, and soon afterwards to notice that the right side of the abdomen was enlarging. The growth was very slow, but the pain gradually became worse, and extended down the thigh and round towards the sacrum. About twelve months before admission the left side of the abdomen also began to increase in size and to become painful. She was able to follow her employment until July, 1876, when she had to desist on account of the pain, which was greatly aggravated by lifting and other physical exertion. The catamenia, which used to be very regular, had for six months appeared at irregular intervals, varying from two to six weeks; the flow was more copious than usual, and lasted from eight to ten days. Menstruation was always painful, but the pain had been much more severe during the last six months. She had been losing flesh and strength for at least twelve months. From about the middle of January, 1877, the pain in the abdomen had greatly increased; and the left hip, thigh, and leg became so painful that she was unable to walk about. The swelling in the abdomen increased to such an extent as to interfere with respiration, dyspnœa coming on whenever she lay down. Her feet and legs, especially the left, were constantly swollen.

On admission the abdomen measured thirty-seven inches in circumference, and was somewhat larger on the left side than the right. It was dull on percussion nearly up to ensiform cartilage, but resonant at the sides; fluctuation was distinctly felt all over the abdomen, and there was no tenderness on gentle pressure.

On Feb. 23rd the cyst was tapped by Mr. Cowell in median line, about midway between pubes and umbilicus, a large cannula being used, and 172 c.c. of fluid were drawn off. The first few ounces were of a light-brown colour, and very thick and gelatinous, so that it would scarcely run through the cannula. After cleansing the cannula with a probe fluid of a much darker colour, and thinner consistence, escaped, which, on microscopic examination, was found to contain a large quantity of cholesterine, altered blood-corpuscles, granular matter, and squamous epithelial cells. After evacuation of the cyst, a probe was introduced through the cannula, and was found to pass three inches towards the left, four inches towards the right, two inches upwards, and four inches backwards.

The wound in the abdomen quickly healed. The dyspnœa and œdema of lower extremities passed off, the pain became much less, and the woman was able to walk about at the end of a fortnight.

On March 17th (three weeks after the tapping of cyst) she was sent into the country, where the cyst refilled.

On May 10th she was readmitted. She stated that during her sojourn in the country her health was fairly good; she did not keep her bed, but lately she had not been able to walk about. Appetite was good, and she gained flesh. The abdomen increased in size slowly but continuously, and during the last month dyspnœa came on whenever she lay down; the pains in back and thigh also returned, and the left foot and leg swelled when she stood. The catamenia had been regular. The abdomen measured thirty-five inches and a half; dulness extended from pubes to ensiform cartilage, and fluctuation was distinctly felt; skin somewhat tense; urine non-albuminous. A menstrual period commenced May 20th and terminated May 25th.

On May 26th a small simple enema was given, which acted well. At 11 A.M. she had a small mutton-chop and one ounce of brandy in water; at 3 P.M. another ounce of brandy was given; at 3.30 she was put under the influence of ether and removed to the theatre, the temperature of which had been raised to 80°. The door of the theatre was locked, to prevent its being opened during the operation. Ovariotomy was then performed by Mr. Cowell, assisted by Dr. Potter, the antiseptic method being adopted. Two steam carbolic sprays were kept working during the operation.

The first incision was about four inches in length in the median line, extending from about two inches below the navel to within one inch of the crest of the pubes. On introducing the hand into the abdominal cavity, the cyst was found to be unattached to any internal organ, there being only two slight adhesions to the omentum, which were easily broken down. The incision was then prolonged up to the umbilicus, and nearly down to the crest of the pubes, and the cyst was punctured with a large trocar, and eight

pints of dark-coloured, thick fluid drawn off. The cyst was then drawn through the opening, no intestines escaping. As the pedicle was found to be short, too short for the use of the clamp, it was secured by a double carbolised silk ligature. The cyst was then separated, and the pedicle returned into the abdominal cavity. Only a few drops of blood escaped. After careful sponging out, a large curved vulcanite drainage-tube was passed down into the posterior cul-de-sac, the other end protruding through the lower part of the wound. The edges of the incision were united by silver sutures, and intermediate narrow strips of plaster, and the wound was covered with protective lint dipped in carbolic lotion, and the antiseptic gauze and bandage. Patient was then removed to a ward specially prepared for her reception.

About three hours after the operation, slight retching came on, and patient vomited about three ounces of dark-coloured fluid. During the night she had several short intervals of sleep, but suffered a good deal of pain in the abdomen, for which opium was administered; but, as the pills were vomited, a two-grain opium suppository was given and repeated every four hours. The urine was drawn off by catheter on this day, and for several days afterwards, every six hours. Towards morning the pain became easier. The patient sucked a little ice during the night, and took a little beef-tea jelly, a teaspoonful at a time.

After the operation, the temperature fell to 97°, but during the night it rose to normal; the pulse remained about 96.

Next day the wound was dressed about noon, under carbolic spray. There had been considerable discharge during the night; wound looked well, no tension nor tenderness about abdomen.

During the day patient slept at intervals, but complained of pain in the right iliac region. She had sucked ice, and had a small quantity of beef-tea, a teaspoonful at a time, and a little soda-water. Opium suppositories were given twice during the day, and a morphia one (half a grain) at night. The temperature rose to 100° during the day, but fell to normal during the night; the pulse rose to 108, and remained so. During the night patient slept a good deal. Two morphia (one grain) suppositories were given during the night.

On the 28th the pain returned in right iliac region during the morning, but passed off again. She slept at intervals during the day, and took nourishment well, beef-tea and milk being given alternately, a teaspoonful at a time. The wound was dressed in the afternoon, and looked well. Catheter passed every six hours. In the evening there was a good deal of pain in the abdomen, for which ten minims of sedative solution of opium were given. Two loose motions passed involuntarily. The abdominal pain returned at intervals during night and prevented sleep. The dose of opium was repeated every two hours.

On the 29th, about 5 A.M., the tube of an enema syringe was passed up the rectum, and a good deal of flatus escaped, after which the patient felt easier, and she slept the greater part of the morning. The wound was dressed about noon, and under carbolic spray as usual, and looked well; in the afternoon the pain in the abdomen returned, and the opium was repeated every two hours; in the evening the bowels acted slightly.

30th.—During the night the pain in the abdomen became very severe, but was relieved with twenty drops of essence of ginger. It returned every now and then. The patient slept at intervals, but towards morning the pain became very severe. The rectal tube was passed, and flatus escaped, which gave relief.

31st.—Passed a better night, pain in abdomen being easier. Wound dressed at noon, when Mr. Cowell removed the drainage-tube. A slight escape of clear pink fluid took place from wound, following the tube as it was withdrawn; the wound was well united, except at the part occupied by the drainage-tube. Very little pain in abdomen to-day.

June 2nd.—The wound was dressed under the spray, and was nearly healed.

4th.—She suffered some pain in the abdomen during the morning. The use of the rectum tube allowed flatus to escape, and gave ease. The temperature had ranged between 98·7° and 99·4°, but rose to-day to 100·6°.

On the 5th the wound was dressed, and the sutures were removed under spray. For two days the temperature had ranged between 100° and 101°, and at times the abdominal pain was very severe, but only lasted for a few minutes. She slept well, and the appetite had remained good.

The temperature fell during the night of the 7th to 99·2°, but rose in the morning to 102·2°, the highest point attained; it fell to 100° during the evening. The wound was dressed and looked well, the carbolic spray being discontinued.

The patient progressed well, with the exception of occasional abdominal pain. All dressings were removed from the wound on the 12th, and a broad bandage was applied round the abdomen. The temperature rose on this day to 102°, but fell again during the evening to normal.

The patient continued to make an uninterrupted recovery, and returned to her home on June 20th, twenty-five days after the operation. Two months later a very satisfactory report was received of the patient's restored health.

NEWCASTLE-ON-TYNE INFIRMARY.

OVARIAN CANCER; THROMBOSIS OF THE SAPHENOUS VEIN; BRONCHITIS; DEATH.

(Under the care of Dr. PHILIPSON.)

A. B——, aged twenty-six, married, was admitted on April 12th, 1877. She stated that for several years she had felt weakly and had experienced uneasy feelings, and at times a dull aching pain in the lower part of the back. About two years previous to her admission, she first experienced discomfort in the right side of the abdomen, and subsequently was sensible of enlargement there. The catamenia throughout had been regular, but scanty. She had never conceived.

The abdomen was found to be greatly distended, and measured at the umbilicus forty-one inches and a half. Both legs were œdematous. The right hypochondrium was more prominent than any other part of the abdomen. On careful palpation, a solid tumour was detected three inches to the right of the umbilicus; while at the umbilical, the left hypochondriac, and hypogastric regions fluctuation was detected. When the patient was placed on her back, it was found that there was dulness on percussion from the ensiform cartilage to the pubes, and from the umbilicus laterally to the flanks, where resonance was discernible. On change of position the dulness and the resonance were unaltered.

Upon very careful palpation it was ascertained that there was slight fluctuation between the solid mass and the abdominal wall, and it was distinctly ascertained that the solid tumour was irregular in outline, posteriorly more than anteriorly. It was found, further, that the fluctuation over the solid tumour was modified by an alteration of the patient's position. The liver extended up to the right nipple, and in the nipple line measured three and a half inches. On percussing downwards from the nipple line, three degrees of dulness were made out: first that corresponding to the liver, then that over the solid mass for four and a half inches, and the third to the crest of the ilium.

The diagnosis of right ovarian tumour, solid and cystic, was given, together with enlargement of the liver and ascites. That the tumour was ovarian was diagnosed from the history of the case, the discomfort commencing in the right side, the gradual enlargement there, the fixation of the dulness upon percussion, and the fluctuation upon palpation; and that the tumour, in character, was solid and cystic was arrived at from the difference in tone of the dulness, as elicited in the right nipple line; while the belief that fluid was present in the peritoneum, in addition to the cyst, was founded upon the fluctuation being found anterior to the solid tumour, and which fluctuation changed as the position of the patient was altered. It was further surmised that, coupled with the enlargement of the liver, there was a probability that the ovarian disease was malignant in nature.

April 22nd.—A consultation with Mr. Russell, the corresponding surgeon, was held. He coincided in the diagnosis, and the following modes of treatment were reviewed:—Simple paracentesis, paracentesis and subsequent injection with solution of iodine, and removal of the tumour by operation. Upon the probability of the disease being malignant,

the second and third methods of treatment were considered unadvisable, and it was agreed that simple paracentesis was alone admissible. The patient had heard so much of the success of extirpation that she was quite prepared to submit to the operation, if recommended, and, indeed, was unwilling that any less decisive mode of treatment should be employed.

23rd.—Mr. Russell introduced the largest needle of the aspirator, about two inches to the right and a little above the umbilicus, and withdrew 198 oz. of a thin clear fluid of sp. gr. 1032. The abdomen was then seen to be relaxed, except on the right side, where a large mobile mass could be felt, and which fluctuated. The needle was reintroduced about four inches above the first puncture, and 246 oz. of a dark glutinous fluid was drawn off, of sp. gr. 1020. It was supposed that the first fluid was from the peritoneum, and the second from the cyst.

The patient progressed favourably. On April 28th the catamenia appeared.

May 5th.—It was noted that the solidity of the right side of the abdomen extended to the umbilical line, and downwards nearly to the crest of the ilium, while the upper border passed under the costal cartilages.

10th.—She left the hospital and returned to her home.

June 6th.—The patient was readmitted. The abdomen at the umbilicus measured forty-five inches. Both legs were œdematous. In both groins enlarged lymphatic glands were felt. The superficial veins over the right side of the chest and the abdomen were greatly distended. The liver dulness was five inches.

July 17th.—Paracentesis was performed by Mr. G. E. Williamson, senior house-surgeon, with the aspirator. At the first puncture 142 oz. of dark viscid fluid, of sp. gr. 1020, was obtained, and at the second puncture 147 oz. of dark grumous fluid, of sp. gr. 1020, was drawn off. It was supposed that two cysts had been punctured.

On July 18th the patient's condition was favourable, but on the 21st signs of thrombosis of the saphenous vein of the left leg became manifest; on the 25th symptoms of bronchitis, and on August 9th œdema of the left arm. The patient became more feeble, and died August 20th.

Autopsy, thirty hours after death.—The body was much emaciated. The chest presented little that was unhealthy, except that the right pleura was covered with recent lymph. When the parietes of the abdomen were laid open, a quantity of dark fluid escaped, and it was then seen that the right side was occupied by a solid, irregular, nodulated tumour, which extended to within an inch and a half of the appendix of the ensiform cartilage, and downwards into the true pelvis, and which had displaced the liver upwards, and had compressed the thoracic viscera. The tumour was found to be a growth of the right ovary, and on its anterior surface it was firmly attached by old adhesions to the surrounding viscera and abdominal wall. The peritoneum was studded with cancerous nodules, varying in size from that of a millet-seed to that of a pea, and at the part in contact with the tumour it was greatly thickened. The tumour, with difficulty, was removed, and it was then found to be composed of two large cysts, superior and inferior, and a solid mass, fully eight inches long, four inches broad, and three and a half inches thick. Both cysts contained dark grumous fluid of sp. gr. 1020. The solid mass was found to have pressed upon and obstructed the veins coming from the left lower extremity. The liver was nearly twice as large as normal, from the development throughout its substance of malignant tubera, varying in size from that of a pea to that of a hen's egg. These were globular, and were partly inclined to soften down. The hepatic substance was injected, and at some parts had the character of fibrous medullary degeneration. The spleen was of full size, and contained a recent hæmorrhagic embolus. The right kidney was firmly adherent to the tumour. The right ureter was obstructed by a cancerous mass, the pelvis being greatly dilated. The uterus and the left ovary were natural. Upon microscopic examination of the solid tumour, the liver, and the nodules of the peritoneum, the characters of carcinomatous disease were very marked.

Remarks by Dr. PHILIPSON.—This case presents an illustrative example of the formation of cancerous structure in the ovary as the primary evidence of cancerous disease, and shows in strong light the morbid tendency which often pervades the whole system when this destructive disease has once displayed itself.

The symptoms were functional in respect of the organ itself, and mechanical in regard to the influence the organ exercises, when enlarged, on adjacent structures. But there was this peculiarity—the association of the ovarian disease with enlargement of the liver, and which pointed to the probability of the disease being carcinomatous, which conjecture was rendered more certain when the lymphatic glands became enlarged.

The period of life, the limitation of the disease to one ovary, the non-implication of the uterus, and the rapid course of events, were points of interest in the etiology.

The treatment throughout was palliative. A case of this kind does not admit of cure; and it is well that this should be remembered, seeing how much discomfort and suffering may be added to the necessary grievance of the disease by interference of our art. Whether there had ever, in this case, been a recommendation of the extirpation of the tumour it is impossible to say, but certainly so much had passed as rendered the patient herself solicitous and anxious that something of the kind should be attempted; and what the result of such a trial would have been cannot be doubted—useless suffering to the patient and disappointment to the operator.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Removal of Hairy Mole from Forehead.—Branchial Fistulæ in the External Ears.

THE ordinary meeting of this Society was held on the 27th of November; Dr. C. West, President, in the chair. After Mr. Baker's paper on a completely successful and very patient attempt at removal of a hairy mole from the forehead, a valuable contribution to morphological as well as pathological science was made by Sir James Paget, in his paper on the occurrence of rudiments of the first branchial cleft on the external ears. Dr. Allen Thomson was present and took part in the interesting discussion which followed the reading of the paper.

A paper was read "On the Removal by operation of a Hairy Mole occupying half the Forehead," by W. MORRANT BAKER, F.R.C.S. The case was that of a child, who, when ten years old was admitted into St. Bartholomew's Hospital, under Mr. Baker's care, on account of a congenital hairy mole which occupied half the forehead. The greatest diameter, from side to side, was three inches and a half, and its vertical diameter two inches and three-quarters. The integument composing it was deeply pigmented, being of a dark blackish-brown tint, with a very uneven surface, and in some parts almost warty. A quantity of brown coarse hairs grew from nearly every part of the surface, some of them being an inch or two in length. The mole was vascular, and always bled profusely when in any way hurt, but it was not distinctly nævoid, and had only grown in proportion to the rest of the body. The treatment was begun by cutting away, under chloroform, the surface of the mole, taking care to keep the incisions from extending to the subcutaneous tissue. The bleeding was controlled by a pad and bandage; and the surface was allowed to heal under the scab, which subsequently formed, and which was but little disturbed during the progress of the case. The whole of the surface was removed by two operations of this kind, and the result obtained was, on the whole, satisfactory, especially with regard to the total absence of any unevenness or contraction of the scar. But a good many of the hairs grew up again, and there was partial reproduction of the pigment. The treatment was continued, after an interval, by the application of nitric acid, the scab being but little disturbed,

as on the occasions on which the knife was used. It was necessary to apply the acid several times before the whole of the disease was eradicated, a considerable interval being sometimes allowed to elapse between the periods of application of the caustic, in order to test the effect. At the date of the patient's readmission into the hospital for the third time, in October, 1877, the disease was found to have almost completely disappeared, the only traces of its presence being here and there a spot of pigmented skin, with a few fine hairs growing from it. The scar-tissue is smooth, whitish, glazed, and supple; not in the slightest degree contracted, and not dragging at all on neighbouring parts. It is quite level with the adjacent healthy integument. The author remarked that the result of the case related justified the conclusion that large hairy moles, and similar deformities of the skin, hitherto supposed to be beyond the reach of surgical operation, may be safely removed by simple measures, if these are carried out with sufficient care. The patient was shown to the Society at its last meeting, and the paper was illustrated with a drawing and photographs.—The PRESIDENT said that those present at the last meeting of the Society and saw the case would agree with him in congratulating Mr. Baker upon the great success attending his efforts at the removal of the growth; for, unless the patient were closely observed, there could not be said to be any evidence of an operation having been performed, there was so little disfigurement.

A paper was then read, entitled "Cases of Branchial Fistulæ on the External Ears," by Sir JAMES PAGET. The occurrence of branchial fistula in the neck has long been known; they were described first by Dzondi in 1829, who believed such fistulæ to communicate with the trachea; but this, as shown later by Heuzinger, was doubtless a mistake. Indeed, it is likely that the three or four cases on record of congenital tracheal fistulæ in the middle line of the neck were due to abscess opening into the trachea, unless they arose from defective closure of the branchial arches in the median line, analogous to ectopia cordis, vesicæ, &c. A writer in 1832 explained the occurrence of cervical fistulæ opening into the pharynx as due to the incomplete closure of branchial clefts; an opinion confirmed by many recent writers, especially Heuzinger, and Sir James Paget has himself met with three such instances. These *cervical* branchial fistulæ occur as two or three minute orifices on one or both sides of the lower part of the neck, and lead upwards to the œsophagus and pharynx; the lowermost being near the sternal end of the clavicle, in front of the sterno-mastoid muscle, the next opposite to the thyroid cartilage, and the highest between the thyroid cartilage and the hyoid bone. Often symmetrical when they are two in number, there may be two at the lower level and one at the upper; or a single fistula may occur on one side only. They vary in length from half to one-and-a-half inches in length, and barely admit a probe; and as a rule are closed at their distal ends, sometimes, but rarely, opening into the pharynx or upper part of the œsophagus. They have a smooth lining membrane secreting a clear mucous fluid, which may be increased during bronchial or nasal catarrh. Rudiments of cartilage are occasionally found in connexion with them, and may be homologous with cervical ribs. They undergo no change during life, and if it be requisite to treat them they may be cured by means of the galvano-cautery. Probably some rare instances of diverticula from the pharynx are branchial fissures closed externally, and possibly some forms of congenital cysts and ranulæ had a like origin. Of branchial fistulæ in the *external ears* there is no account on record in this country, and foreign literature only yields six or seven cases, most of which are related by Heuzinger. The cases now described occurred in the family of a gentleman perfectly well formed in other respects, who has himself a branchial fistula on the right side of the neck. His father and a sister, as well as four of his own children, had similar malformations; the fistula in two of the latter being on the left side, and on the other two symmetrically disposed on each side of the neck. But, in addition to these cervical fistulæ, the gentleman himself, his sister, and five of his children, each present fistulæ in the helix of one or both ears. These *aural* fistulæ are minute, their orifices small, and their canal half an inch in length, passing from below forwards and downwards, being less soft and flexible than the cervical fistulæ, producing no secretion, and giving no distress. The co-existence of the latter threw light upon those in the ear, and a similar coincidence had been recorded by Heuzinger. Hence these aural fistulæ are probably due to the incomplete closure of the upper or post-oral fissure, that part of it which does not enter into the formation of the Eustachian tube, tympanum, and external meatus. In other recorded cases the openings have been at the lower or anterior part of the helix or lobule of the ear. It is likely that such cases are not so rare as they seem; and, further, extensions of the same non-closure of the post-oral fissure might be seen in such malformations as complete transverse partition of the auricle, and one case in which a linear depression on the helix and anti-helix was continued on to the cheek was of like nature. There are now sufficient evidences of malformations due to incomplete closure of every one of the branchial fissures; these aural fistulæ being due to defective closure of the first fissure between the mandibular and hyoid arches, the upper cervical to the cleft between the thyroid and hyoid, the lower to the cleft behind the thyro-hyoid arch, and the fourth to the last cleft above the thorax. Referring next to the association between these cases and those of "supernumerary ears," the author shows that they are found only over the lines of former branchial fissures, and may be considered as cutaneous opercular growths, homologous, though abnormally, with the natural auricles, which guard the first cleft. Mr. Birkett has recorded in the Pathological Transactions a case of a girl, seven years of age, with two supernumerary auricles in the neck, corresponding in position with the usual seats of the upper and lower branchial fistulæ. The tissues of the lobes and their fibro-cartilage were clearly distinguished in these auricles. Mr. Holmes, in his work "On Surgical Diseases of Children," gives an instance of a small pendulous body in the skin near the hyoid bone, towards which a small sinus passed from above, and in one of Heuzinger's cases a small fistula near the sterno-clavicular articulation was concealed by a flat process of skin. Similar abnormalities have been noticed in sheep, goats, and pigs. Dr. Allen Thomson long ago pointed out that malformations of the external ears were frequently associated with malformations in or near the first or mandibular arch, such as hare-lip and cleft palate, and the same association has more recently been noted by Virchow. The author of the paper had observed that many of the persons born with aural branchial clefts have become deaf, and thus have been instances, however slight, of the general law indicated by Dr. Allen Thomson. This was well illustrated by the cases upon which the paper was founded, and others have been placed on record. The occurrence of deafness could hardly be casual, but rather indicative, not of any material change in the structure of the ear, but of such a defect of textures as rendered them morbidly liable to disease. In an appendix to the paper a case, communicated to the author by Mr. Cumberbatch, is related, in which traces of the branchial fissure occurred in the helix of the ear; a small depression, large enough to lodge a No. 4 shot, being seated on the upper part of a peculiarly-shaped pinna.—The PRESIDENT accorded the thanks of the Society to Sir James Paget for his paper, which dealt with most important and recondite questions of development, and yet had distinct bearing upon practice.—Mr. DALBY exhibited a specimen of a rudimentary ear, which was the seat of a fistulous opening. It was removed from a child two years of age, the other ear being perfectly sound; but on this side, at a plane posterior to the normal seat of the ear, was this rudimentary auricle. The depression did not admit of the passage of a probe.—Sir JAMES PAGET had no doubt this was an example of the malformation he had described.—Mr. ALBAN DORAN said there were two points to be insisted on in considering such abnormalities. There was the very common occurrence of ectopiæ in the middle line of the body, depending on the non-union of the visceral arches. This union occurs naturally in the mammalian embryo at a late period of fœtal life, after the whole of the cartilaginous arches have been differentiated to form the future osseous skeleton. They are pure deformities, and are really morbid, often leading to fatal issue. On the other hand, the instances related by Sir James Paget have a morphological as well as a pathological significance. They represent conditions obtaining throughout life in the lower animals. But in the mammal they occur very early in embryonic life, when the cartilaginous segments are undifferentiated and not divided into the different bones. The

small bones of the ear are developed near the root of the post-oral arches, and hence in connexion with them arise such deep-seated deformities, which persist through life, but which do not lead to such grave effects as the later arising ectopiæ. Hence probably the reason why attention is directed less to them than to the graver class of malformations. He made these statements not upon theoretical grounds, but from practical study of the development of the internal ear in mammalia and other vertebrata.—Mr. CALLENDER was struck by the suggestion made in the paper, that probably "ranulæ" were examples of similar defects to the branchial fistulæ. He had himself always thought this feasible, and was glad to find that the same thought had occurred to Sir James Paget. A partial non-closure of the cleft between the mandibular arch and the lingual arch—that, namely, formed by the styloid process and cornu of the hyoid bone with which the tongue is so intimately connected—might conceivably result in the persistence of a cyst or a sinus in the usual situation of ranula. Another point was as to the homology of the portions of cartilage, which Sir James had described as being occasionally met with in the tracks of these fistulæ. He did not think there was anything more beautiful than to see the way in which from the basal structure of the skull masses were given out investing the cranial nerves—e. g., the fifth hypoglossal, glosso-pharyngeal, pneumogastric, and spinal accessory. These are outgrowths from the central mass, and are not axial arches such as the ribs, and he would think that the portions of cartilage described in connexion with the fistulæ rather of this nature—portions of cartilage differentiated off from the hyoid and thyroid arches, than as representing cervical rib-structures.—Mr. FRANCIS MASON referred to the case of a young lady whom he had seen in consultation with Sir James Paget, who presented a fistula at the sterno-clavicular articulation, which extended almost to the pharynx. No internal opening could be seen on examining the pharynx with the laryngoscope, but the patient believed there was a communication with the throat, the fistula discharging a gummy secretion, and when the external opening is closed there is discomfort and redness in the throat. The fistula was noticed at birth.—Sir JAMES PAGET said Dr. Allen Thomson was present, and would exhibit the original drawings of his observations referred to in the paper.—Dr. ALLEN THOMSON said that the subject had engaged his attention a long time ago, and the three drawings he exhibited were illustrations of malformation of the auricles, in one of which a fistulous opening such as described in the paper could be observed. The peculiar malformation of the external ear was associated, in these cases, with complete occlusion of the meatus externus. Two of them showed also a remarkable deformity in the lower jaw, indicating the association of several malformations connected with the development of the first post-oral arch. They also showed cleft palate, with displacement of the canine and lateral incisors, a tendency to hare-lip and separation of the incisor bones. In two of the cases, where there was much deformity, there was deafness almost amounting to muteness, but still they could make themselves understood. In the third case, that of a young man, hearing was fairly good, so that he was able to join in play, in school work, &c.; and he could talk well, although in him, as in the others, the meatus was completely closed. He seemed to perceive sounds most acutely by the top of his head, which he used to present to the person addressing him (holding his hands over his ears) when in the act of listening. This was confirmed also by experiments with the tuning-fork, and was noticed also in one of the other cases. Dr. Thomson attributed this to the impression being conveyed through the arch of the skull to both ears. In all the cases the external meatus must have been closed completely by bone; and Dr. Thomson showed a drawing exhibiting a section of the temporal bone with the canal thus occluded. In such cases the tympanic bone, and all that is behind the fissure of Glaser (as the vaginal process, &c.,) is absent, showing the futility of attempting to restore the passage by surgical means. One of his cases, that of a lady, had when young been operated on by Sir Astley Cooper; but like other cases recorded, the operation was of course unsuccessful. Sir James Paget had described the depressions on the auricles as being rudiments of the first branchial cleft—i. e., of the cleft which would have formed the external meatus. This would explain the occurrence of one such depression, but not more than one, for the second cleft would be found high up in the neck; the third midway between the hyoid and the clavicle, and the fourth close to the clavicle. He could understand having different fistulæ as persistent branchial clefts, but could not conceive there being more than one such cleft represented in the pinna, unless the multiple aural fistulæ represented a divided condition of the first passage. Sir James Paget's paper presented a full and scientific view of the subject, especially as regards the explanation given of supernumerary auricles, a fact new to himself and of great interest. Dr. Thomson added, that in 1845 he gave a short account of three cases of cervical branchial fistulæ which came under his notice; one in the middle of the neck, and the others low down. In one a probe could be passed for two inches, and was felt in the throat. One of the cases had been cured by Prof. Gairdner, who had slit up the passage.—Mr. RIVINGTON related the particulars of an interesting case of the same nature as those described by Sir James Paget. In this case there was a minute aperture in the helix admitting a probe for half an inch; it periodically discharged a yellow ceruminous liquid, which, when retained, gave rise to itching, coldness, and slight deafness. It was bilateral, and was inherited on the maternal side, many members of the family having it.—Mr. PUGIN THORNTON said that in two cases of branchial cervical fistula he had recently under his care he had employed electrolysis with good result, the small size of the passages not allowing of introduction of the galvano-cautery.—Sir JAMES PAGET, in replying, said that already the paper was bearing fruit, and testified his belief that the cases were not so rare, for since the paper was written three cases were related—Mr. Cumberbatch's, and those by Mr. Dalby and Mr. Rivington; and one of Dr. Allen Thomson's drawings showed the same condition, and no doubt many others would be observed, and in time would lead to the explanation of the occurrence of diseases in parts already damaged in texture. He thought that the formation of these fistulæ in the external ears was from that part of the first cleft being not utilised in the formation of the external meatus and Eustachian tube, and the closure of the cleft might be imperfect at more than one spot. The case just mentioned by Mr. Rivington bore out this view—the fistula secreting a fluid like that of the external meatus; and no other explanation would account for the coincidence in many cases of these aural fistulæ with branchial fistulæ in the neck. The comparison of the relics of cartilage near these clefts to ribs was made by Heuzinger; but it might well be, as Mr. Callender had suggested, that they are rather the rudiments of the cartilage found in all the branchial arches. Mr. Mason's case of cervical branchial fistula was the most marked example he had seen, but he did not think it communicated with the pharynx. It was a notable fact that out of sixty cases of cervical fistula on record more than fifty had been observed in Germany, not more than five or six in England, and two or three in France; but he had no doubt this did not represent nearly the proportion of cases which had been observed, but not recorded, in this country. Mr. Doran was quite right in drawing attention to the morphological distinction between the two forms of malformation. Median fissure in the neck—except associated in wholly malformed monsters—was very rare; he did not know of any case on record, those which are described as such being probably instances of abscess, &c., perforating the trachea from without. He would venture to repeat the hope that having called the attention of the Society, and, through it, of pathologists generally, to this condition, it might result in the collection of a large number of cases, out of which something more complete might be arrived at than his paper attempted.—The PRESIDENT said he was forcibly reminded of a saying of his old friend and master, Dr. Latham, that "a great deal of knowledge runs to waste," and he said this more in reference to the next meeting of the Society, when a paper would be read on Tetanus and Hydrophobia by Dr. Coats, of Glasgow, and he hoped that all the surgeons of the London hospitals would be present, and help, by contributing their knowledge, which, in one at least of these subjects must be very extensive, to throw light upon such grave and important matters.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Acute Suppurative Synovitis of Knee-joint treated Antiseptically.—Ligature of Femoral Artery with Catgut for Popliteal Aneurism.—Iodide of Potassium Eruption.

THE ordinary meeting of this Society was held on Nov. 23rd, Mr. Callender, President, in the chair. Again the chief subject discussed was that of the carbolised catgut ligature, two cases resembling one another in many respects, but differing slightly in the results of ligature, being read by Messrs. Christopher Heath and T. Smith. Both were cases of popliteal aneurism, for which ligature of the femoral was practised, catgut and antiseptics being used. In both there was recurrence of the blood-flow in the artery, and in one an aneurism formed at the seat of ligature. This difference in the result might be attributed to differences in the mode of application of the ligature.

Dr. MARRIOTT (Sevenoaks), read notes of a case of Acute Suppurative Synovitis of the Knee; evacuation of the pus with antiseptic precautions; recovery. The patient, a boy nearly four years of age, received an injury to his knee by a fall on July 20th. On the 22nd, the joint was swollen and painful; temperature 100°. A long splint was applied, but on August 7th the joint measured ten inches and a half in circumference. A fine puncture was made into it, and one ounce of serum escaped. This gave temporary relief, but the swelling again increased, the temperature rose to 102°, and on the 11th the patient had a rigor. The next day Dr. Marriott punctured the joint under carbolic spray, and using all the antiseptic precautions advised by Mr. Lister. One ounce and a half of pus was evacuated. A drainage-tube was inserted and a back splint applied to the limb. Next day the morning temperature was 100°. On the 15th and 19th the dressings were changed, and on the 25th the wound had healed. An iron splint was worn for some time longer, passive motion, &c., employed, and by Sept. 27th the joint was of the same size as the other; recovery was complete, and was to be attributed to the antiseptic precautions. The child was shown to the members.—Mr. MORRANT BAKER doubted whether the successful issue could be solely attributed to the antiseptic precautions. Quite recently he had under his care a child two or three years of age, whose case closely resembled that just read. It was a case of acute suppurative synovitis of the knee, and Mr. Baker had treated it by opening the joint in two places—namely, one incision above and to the inner side; the other below and to the outer side of the joint. Poultices were then applied, but no antiseptic precautions were taken, and the joint has now completely recovered. He believed that a month hence it would show as free movement and as little deformity as Dr. Marriott's patient.—Mr. MAUNDER said that acute suppurative synovitis of the knee-joint was such a formidable matter that every one would congratulate Dr. Marriott upon the happy result of his case. Many, however, could recall the treatment of similar cases successfully, especially in the young subject, on the same principle as acute abscesses elsewhere—namely, by free incision.—The PRESIDENT suggested that Mr. Baker should, on the completion of the case, also bring his patient to the Society.

Mr. C. HEATH read notes of a case of Popliteal Aneurism, for which the femoral artery was ligatured twice. The patient was an engine-driver, who previous to the occurrence of the aneurism had enjoyed good health. Symptoms pointing to right popliteal aneurism began eight weeks before his admission into University College Hospital, and ten days before a pulsating swelling was noticed in the ham. In addition to the local signs of aneurism, there was no arcus senilis and no evidence of arterial degeneration; the arteries were, however, rather tortuous. For fourteen days various methods were tried to coagulate the blood in the sac, without success: long-continued pressure by Carte's tourniquet, flexion of the knee, Esmarch's bandage and rope, all in turn being applied; the first having been employed altogether one hundred and two hours and a half, the second for sixty-five hours, and the third for four hours and a half. This treatment was ill-borne by the patient, and, the pulsation in the aneurism being as forcible as ever, Mr. Heath, on July 26th, ligatured the femoral artery at the apex of Scarpa's triangle, using the catgut ligature and antiseptic precautions. After ligation, pulsation returned at the end of nineteen hours, and lasted for fourteen days, when it ceased. Six days later (Aug. 15th) the patient got up. On the 20th the pulsation reappeared in the aneurism, after being absent for eleven days; and four days later—the twenty-ninth day after ligature—pulsation was found in the whole length of the femoral artery. Pressure was again had recourse to, but the aneurism continued to increase in size, so that Mr. Heath determined to ligature the femoral artery a second time. Accordingly on Sept. 19th he tied the vessel below the sartorius, using a hempen ligature. Pulsation returned in the sac on the following day, but gradually got weaker, and ceased in seven days. This operation was not carried out on antiseptic principles, and it was followed by more pain and more general disturbance than the first operation, the temperature reaching a maximum of 102·2°, as against one of 99·6° after the antiseptic operation; there was also very free suppuration on the second occasion. The patient left the hospital on Oct. 20th, and was exhibited to the meeting. Mr. Heath said that the aneurism was probably more or less tubular, and he attributed the failure of the first operation to the catgut employed in it being insufficient to divide the coats of the femoral artery.

Mr. THOMAS SMITH read notes of "A Case of Popliteal Aneurism treated by Ligature of the Superficial Femoral with Carbolised Catgut, followed by the Formation of an Aneurism at the Seat of Ligature." The patient, a man aged forty-two, was admitted into St. Bartholomew's Hospital on Feb. 14th, 1876, with a right popliteal aneurism, symptoms of which had appeared two months before admission. There was the characteristic impulse and bruit, and the sac could not be emptied by compression. On Feb. 28th digital compression of the femoral was carried on from 9 A.M. to midnight, and resumed on the 29th at 9 A.M., but it had to be abandoned on account of the pain and constitutional disturbance provoked by it. On March 11th Mr. Smith tied the femoral artery with a carbolised ligature, and under antiseptics; two days later pulsation returned in the sac. The wound rapidly healed, and the patient left the hospital against advice sixteen days after the operation, with the aneurism feebly pulsating. He returned in a month with the circulation in his femoral thoroughly restored, and the aneurism pulsating forcibly. He refused any treatment, but was supplied with an elastic stocking to be applied to the whole limb. Six months later the patient reappeared; the popliteal aneurism had much increased in size, and a second aneurism, the size of a large walnut, was seen just beneath the scar of the operation. It pulsated very forcibly, and gave a well-marked thrill and loud rasping bruit. After a few days' rest in bed, an unsuccessful attempt was made to cure the aneurisms by the application of Esmarch's bandage. This was applied for fifty minutes; it gave great pain, and produced no improvement. Finally, the superficial femoral artery was ligatured just below the upper aneurism, antiseptic dressings being again used, but a carbolised silk ligature, cut off short, being employed instead of the catgut. Pulsation ceased at once in the lower aneurism, and did not return. Recovery was rapid; there was no local irritation or constitutional disturbance. After the operation the pulsation in the upper aneurism gradually diminished, and at the end of five days the swelling became much smaller, and pulsation was scarcely perceptible in it. In a few days it had regained its former size, and pulsated as on admission. As it caused the patient but little inconvenience he declined further treatment, and left the hospital, wearing still an elastic stocking. He had now appeared at the Society, and it was the first time that Mr. Smith had seen him since his discharge from the hospital twelve months ago. It would be seen that the lower aneurism was cured, and the upper much diminished in size. Mr. Smith, whilst testifying to the advantage of carbolised catgut for ligature of wounded vessels, doubted whether it could be applied with safety to large vessels in their continuity. Until the occurrence of this case he had had no occasion to find fault with this form of ligature, and had been led to attribute accidents following its use to avoid-

able defects in the catgut employed. But in the present case the ligature used had been kindly supplied by Mr. Lister himself. It failed to constrict the artery for more than forty-eight hours, yet, from the subsequent formation of the aneurism, it had been probably applied firmly enough to divide the inner and middle coats. He did not think, then, that the mode of application accounted for this result, but that the uncertainty of the effects of the ligature was due to its varying degree of solubility in the tissues. Dr. G. Y. Heath (THE LANCET, 1877, vol. i., p. 417) has stated that in one case the ligature three days after its application was softened and partly absorbed; and in another case secondary hæmorrhage had followed. On the other hand, he had found it unaltered on the fifteenth day. In three of Mr. Bryant's recent cases the ligature was found to have divided the vessel completely, and to be itself absorbed; whilst Mr. Jas. Lane had recently published cases, in one of which after thirty-two days, and in another after twenty-eight days, the occlusion was complete, and the external coat of the artery not ulcerated. These differences depended on the mode of preparation of the gut; and Mr. Smith expressed the hope that before long some means might be discovered in the method of preparing the catgut by which, without destroying its solubility, it would be rendered fit to constrict an artery for such a length of time as might be sufficient for a firm clot to form within the vessel. So far as his own case went, it was peculiar in this respect, that the patient, by his rashness, did all in his power to contribute to the untoward result.

Mr. MAUNDER could only repeat what he had said on a previous occasion—that he would not use the catgut again to ligature an artery in continuity. He had been gradually led to the conviction of the dangers associated with it, not by his own personal experience, which had been as good as when silk was used, but from a knowledge of the disasters which had happened to other surgeons. It was difficult to understand how Mr. Bryant concluded that catgut was the best material to use, when in two of his cases secondary hæmorrhage occurred, and when he stated that this ligature dissolves within an uncertain period. Mr. Lane's cases were as satisfactory from silk. He himself had tied twenty-eight arteries in continuity, nineteen with silk, and nine with antiseptic precautions, and of these five with catgut. He had not had an instance of secondary hæmorrhage in his practice, but contended that if serious and sometimes fatal consequences had attended a method of treatment in the hands of surgeons like Spence, Eben. Watson, Callender, Heath, and T. Smith, the material ought to be abandoned by him as peculiarly unsafe. In fairness to Mr. Lister, if catgut be used at all, it should be used with strict antiseptic precautions, otherwise no advance is made beyond the experiments of Astley Cooper and others who abandoned it in favour of silk. In his first antiseptic case (in Sept. 1868), Mr. Maunder used a carbolised silk ligature, cut short, antiseptically. The wound healed rapidly without suppuration, and no doubt the patient still has the ligature on his common carotid. He was glad to find that Mr. Smith had obtained primary union when using the antiseptic silk, the ligature which he himself should use in future.—Mr. BARWELL said that he must again differ from Mr. Maunder, although he concurred in much that had been said as to the unreliability of catgut. Secondary hæmorrhage was not unknown to occur when the silk ligature was employed, and it was not a common result in cases where catgut was used. So, again, the formation of the aneurism at the seat of ligature in Mr. Smith's case did not merely depend on the material used; it might have followed any form of ligature. Again, in Mr. Heath's case he could not see what connexion there was between the recurrence of pulsation for a second time, after it had ceased for fourteen days, and the form of ligature used. Possibly the catgut was too rapidly absorbed, and perhaps the inner coat insufficiently divided. He thought that if the gut had been kept long in oil, and if the ligature were tied too tightly, its absorption would be hastened. It ought to last from three to six days. For himself, he usually tried to avoid doing more than simply divide the inner coat, so far as that was possible; not tying the second knot more firmly than the first. Thus occlusion of the artery was obtained without the risk of rapid absorption of the gut or ulceration of the vessel-wall.—Mr. GODLEE asked Mr. Heath what form of ligature he intended to use in the future. From his using silk in the second ligature, he implied that the accident was due to the catgut. Was he going to discard catgut in favour of silk?—Mr. HEATH, in reply to Mr. Barwell, supposed that in his case the ordinary changes took place in the artery after its occlusion by the ligature, and the return of pulsation in the aneurism a few hours later was ordinarily seen. Then he believed that some coagulation took place in the aneurism, and that when the current in the artery was restored by the loosening of the ligature, the flow was sufficient to wash away the obstructing clot. The second ligature produced complete obliteration of the artery. To Mr. Godlee he would say that he had not made up his mind as to what form of ligature he should use in future, and he regretted that Mr. Lister had not been present to give them information as to his own practice, which should be a guide to those who were now groping in the dark. Certainly it was only fair to use antiseptic precautions when using the catgut ligature.—Mr. T. SMITH thought that all the differences of opinion in vogue as to the mode of tying the ligature, as to the time for its solution, &c., depended upon the very great variation shown by the ligature with regard to its absorptive qualities, it remaining in various cases undissolved from twenty-four hours to thirty days. No one knows how long it should be soaked in the oil to render it perfect, and the ligature given to him by Mr. Lister himself was not available for compressing the artery for more than forty-eight hours. He would like to know why Mr. Lister finally discarded the use of carbolised silk. Was it because that in one case a secondary abscess had formed? He differed from Mr. Barwell in his opinion that the material had nothing to do with the formation of the aneurism in his case, for if silk had been used the vessel would have been thoroughly divided, and pulsation would not have recurred in it within forty-eight hours of its application. It had been shown by experiments on animals that an aneurism could be produced by traction on an artery leading to division of its inner coats. For himself, he would again use an antiseptic catgut ligature to-morrow, if Mr. Lister would give it him.

Dr. TILBURY FOX then read notes of Cases of Iodide of Potassium Eruption, illustrated by drawings. After a brief review of the present state of knowledge concerning the toxic action of iodide of potassium in inducing eruptions on the skin, the author related two cases in which an acneiform rash gradually developed into what at first sight appeared to be a bullous eruption, the bullæ varying in size from a pea to a shilling. The eruption was quite distinct from hydroa, and was, Dr. Fox contended, a modified form of acne, the iodide, as in the case of bromide of potassium, stimulating the sebaceous glands and their surrounding parts to an excessive degree; and, as a consequence, altered (and liquid) sebum was rapidly poured out, causing rapid elevation of the cuticle, and giving rise to the appearance of ordinary bullæ with opalescent contents. In some instances the bullæ-like bodies had burst and given place to fungoid masses. In each case there seemed to be a peculiar idiosyncrasy to the iodide. The first was a man of twenty-seven years of age, who was suffering from advanced syphilitic disease of the pharynx. On the third day, after taking iodide of potassium in doses of ten to eighteen grains daily, a small vesicular eruption appeared on the forehead and eyelids, the eruption subsiding when the drug was discontinued. The other case was a woman thirty-nine years of age, under the care of Dr. Broadbent at St. Mary's Hospital, suffering from chronic Bright's disease. On the fifth day, after taking a mixture containing only three grains of the iodide, the eruption appeared, and continued to increase after the drug had been discontinued. It then gradually disappeared at the end of about ten days, and a subsequent administration of the drug again resulted in the appearance of the peculiar rash.—The PRESIDENT agreed that the form of eruption described must be rare. He had never seen it. He thought that, as a rule, these eruptions from drugs were met with less often when the latter were given for affections not complicated with skin eruptions. In some cases the iodide might be continued without causing an increase in the rash produced by it.—Dr. BROADBENT said that the second case related by Dr. Fox was the second of that form of eruption from iodide of potassium which had come under his own notice, and he was thus able to recognise its nature, the iodide being subsequently given, by way of experiment, to

reproduce the eruption. The patient was extremely ill with hæmoptysis complicating the renal disease, and she also had ulceration on the tongue. The first case seen by Dr. Broadbent was that of a young girl with an albuminoid liver and enlarged spleen, who subsequently died in a fit. In her case, small doses of the iodide (three grains) were followed by a bullous eruption over the body, and here again, after the skin had returned to its natural state, the eruption was recalled by again resorting to the drug. In both there was, no doubt, a marked idiosyncrasy to iodide of potassium. He had never seen any such effects produced by large doses in syphilitic patients. The contents of the bullæ so rapidly formed seemed to be serous, and not products of altered gland secretion.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Removal of Nævus by Elastic Ligature.—Modified Chopart's Operation.

THE ordinary meeting of this Society was held on Nov. 26th; Dr. George Buchanan, President, in the chair. Dr. L. Mackintosh Ross, of Glasgow, was elected a Fellow. The evening was devoted to the exhibition and relation of clinical cases, &c.

Dr. SANSOM showed an improved form of Hypodermic Injecting Syringe.

Dr. WYNN WILLIAMS showed a child, three months of age, from whom a large nævoid growth had been removed by the elastic ligature. Before removal, the growth presented a florid red appearance, and measured three inches and a half from above downwards, and three inches and three-quarters transversely, projecting half an inch above the integument. The tumour separated on the eighth day after application of the ligature.—Mr. W. ADAMS spoke highly in favour of the elastic ligature.

Dr. LICHTENBERG showed a boy, aged fifteen, on whom he had performed a modified form of Chopart's operation, the scaphoid and half of the cuboid being left behind. The operation was performed for injury by which the metatarsal and cuneiform bones were completely crushed. The advantages claimed for this procedure were, that more of the foot was saved, the scaphoid was left to support the head of the astragalus, and the calcaneo-scaphoid and calcaneo-cuboid articulations were left intact. The result in this case proved eminently satisfactory.—Mr. ADAMS doubted the advisability of sawing through the cuboid in cases of strumous disease.—Mr. ASTLEY BLOXAM said the operation had been first performed by Mr. Hancock, and was recommended in his work on the Surgery of the Foot. In strumous disease, all the bones being more or less involved, Syme's operation had generally to be had recourse to.

Mr. ASTLEY BLOXAM related two cases of patients who had suffered from severe pain referred to the neighbourhood of the head of the radius, following the constant playing at lawn tennis. The pain followed the course of the radial and musculo-spiral nerves, and appeared to be due to violent supination of the forearm. He inquired whether it was due to inflammation of the supinator radii brevis muscle, or to its increased contraction causing sudden pressure on the posterior interosseous nerve, or whether it was simply neuralgic? An analogous instance occurred in the pain sometimes complained of by sportsmen after shooting, and referred to the left cervico-brachialis muscle, which was in constant use in the raising the gun to the shoulder in the act of firing. That also is a muscle which is pierced by a large nerve.

MRS. BELL, of Chapel-ash, Wolverhampton, a short time since offered one thousand guineas to endow a medical library in connexion with the Wolverhampton and Staffordshire General Hospital, in memory of her late husband, Dr. Bell, and to be called after him; and at a late meeting of the Weekly Board, Dr. Millington announced that he was now empowered by Mr. Edward Pugh to offer £1000 for the erection of the necessary building.

Reviews and Notices of Books.

The Mechanism of Man. An Answer to the question, "What am I?" A popular Introduction to Mental Physiology and Psychology. By EDWARD W. COX, Serjeant-at-Law. London: Longmans and Co. 1876.

THE author of this work says himself that he has undertaken a "presumptuous enterprise." We are inclined to agree with him, and to regret that he thought it requisite to publish his thoughts and lucubrations on "The Mechanism of Man" without a knowledge of either physiology or anatomy. Complaining of the entire disregard of the plainest principles of evidence, the President of the Psychological Society assumes at the very outset of his argument the existence of a separate and independent *vital force* generated within the animal mechanism, the actions of which are directed by a self-contained *intelligence*. He distinguishes, though how we know not, between nerve force and psychic force. He expresses surprise at the "entire disregard of the plainest principles of evidence by the votaries of science, who assert and deny facts apparently without the slightest conception of the nature or degree of *proof* necessary to be produced before any asserted fact can be either accepted or rejected," and says one "will reject the testimony of twenty credible men because the fact they assert appears to him to be contrary to some assumed fact or theory which he has hitherto holden to be true." And, further, that "this disregard of the most elementary rules of evidence is especially remarkable in works that treat of physiology, medicine, and psychology." Now this is hardly fair. Take the case of the Welsh fasting-girl. Twenty credible witnesses (credible in a court of law) could easily have been found to swear this girl took no food, and the very reason the imposture went on so long was that no physiologist cared to state publicly that, on "assumed facts," it was impossible. Of course, when scientific observation was applied to the case, the bubble burst, and the child died. Mr. Cox says the history of science is one long record of the conflict between *fact* and *prejudice*. Is this so? Would it not be more correct to say that the advance of science is one long record of the conflict between accurate observation and *popular* prejudice?

Mr. COX, without adducing a shadow of proof, maintains that the universe is composed of *matter* and *non-matter*, the proportion of the latter to the former being as Mont Blanc to a grain of sand. *Matter* becomes *spirit* by the resolution of its molecules into the atoms of which they are constructed. If the molecules of which Mont Blanc is made were to be suddenly resolved into atoms, the mountain, without the slightest change in shape or bulk, would instantly vanish from our perception. We should cease to see it or to feel it. We should even walk through it without the slightest consciousness of its presence, &c. &c. It is not even impossible that our world, in its circuit round the sun, *may* include worlds peopled by races of intelligent beings—nay, the very atmosphere in which we live *may* be thronged with forms, and so on; and these considerations, Mr. Cox tells us, throw a flood of light upon many phenomena that now perplex and startle us. Can it be possible that Mr. Cox considers these loose, baseless, visionary ideas represent scientific theories? No wonder that, as he complains, no reviewer will touch his books. Mr. Cox propounds a most astonishing view of the process of development. Overlooking the phenomena of fission and gemmation, and of parthenogensis amongst the higher animals, he considers that every organised being proceeds from a double germ, and that one germ forms one lateral half, the second the other lateral half of the body; and the difficulty of the

spleen, liver, and intestines, which he admits are single, he gets over by stating that the necessity of the circumstances has caused their position to be relatively shifted, and their symmetry is fore and aft. The whole chapter on this subject is amazing in the rashness of the assumptions, combined with the most amusing dogmatic assertion of the commonest facts, and we can only faintly hope that in referring Mr. Cox to Mr. Darwin's recent work, he may be able to recognise what scientists demand as a basis for argument. Mr. Cox may be an excellent lawyer, but he is a very bad physiologist. Our advice to him is to take a three years' course of anatomy and physiology at any metropolitan school, and then rusticate a year or two more with Spencer's "First Principles" and "Psychology."

Diseases of Women. By LAWSON TAIT, F.R.C.S. London: Williams and Norgate.

THIS work consists in part of the author's "Hastings Prize Essay on Diseases of the Ovaries." The work treats of the diseases of the individual parts of the female organs of generation in succession, beginning with those of the mons veneris and ending with those of the pelvic bones. This arrangement has considerable disadvantages inseparable from it, which become apparent in the course of the work. Under the diseases of the vulva the author gives an account of the morbid changes found in the painful red spot frequently met with in that situation, and this appears never to have been done before. He "found that at the site of the spot all the textures had been removed save a few fibres, the walls of the capillaries, and the superficial epithelium under which the loops of the capillaries, with thinned and dilated walls, lay almost unprotected," amongst which lay the nerve fibres, "almost as unprotected." The author limits the occurrence of this affection to the climacteric period and after, but incorrectly, for it also occurs in young and unmarried women.

The diseases of menstruation are very briefly treated—a few lines only being devoted to dysmenorrhœa. Under chronic endometritis membranous dysmenorrhœa is described. In some cases the membrane is regarded as an adventitious structure, the result of inflammation; while in others it is a "menstrual miscarriage of a peculiar kind," depending on an "absence of complete fertility on the part of one or other parent, most probably on the part of the male." The evidence in favour of this conclusion, however, is far from satisfactory. The work is generally sketchy where it should be full and complete, and comparatively lengthy where the subject might be dismissed in a few lines. Thus, symptomatology, prognosis, and treatment, are given but very briefly, while an obscure point in pathology of no practical interest is discussed comparatively fully. The author states, however, "My chief object in this book has been to offer the results of my own experience in as condensed a form as possible," and this may perhaps be sufficient excuse for the defects pointed out. To students the work will give but an imperfect idea of our present knowledge of diseases of women—to practitioners we cannot think it will be of much use; while it may prove of interest to those who pursue gynæcology as a special study. We closed the work with a feeling of regret that, at a time when so much had been done in, and so many were working at the subject, anyone had undertaken to write a book on diseases of women from the results of his own experience alone.

OUR LIBRARY TABLE.

Nurse and Patient; and *Camp Cure.* By S. WEIR MITCHELL, M.D. Reprinted from "Lippincott's Magazine." Philadelphia: J. B. Lippincott & Co. 1877.—The first of these two sketches is devoted to some wise comments on nurses and nursing, well suited to convey warning and counsel to those who have sick relatives. They are, of course, intended for the public, not for our profession. There would seem to be even greater difficulties in getting private nurses in America than in our own country. The second paper is a refreshing and breezy account of what the auther calls "Camp Cure," which corresponds to, and appears to be a substitute for, a combination of a yachting cruise, a month's shooting on the moors, varied with trout-fishing and a walking or climbing tour in Switzerland, only that in these more prosaic ways we have to content ourselves, having no vast American lakes and forests. We heartily echo, from experience, the author's saying that "the surest remedy for the ills of civilised life is to be found in some form of return to barbarism. ..... Civilisation has hurt, barbarism shall cure," especially when "barbarism" means camping out, shooting, fishing, and canoeing with such good company as the author.

Virchow's Archiv. Band 71, Heft 3. 1877.—This number contains the following articles:—1. Fränkel on the Pathological Changes of the Laryngeal Muscles in Phthisis. 2. Schottelius gives two cases of Unilateral Hydronephrosis and Urethro-vesical Fistula. 3. Nothnagel, Experimental Researches on the Functions of the Brain. 4. Wernich, Clinical Observations on the Japanese Variety of Beri-Beri. 5. The Influence of Quinine on the Migration of White Corpuscles from the Vessels, by Dr. Arnold. 6. The Diagnosis of Amyloid Degeneration of the Kidneys, by Dr. Fürbringer. 7. The part played by the Medulla of Bones in Pernicious Anæmia, by Wm. Pepper; and lastly, Some Defects in the Formation of the Uterus, by Carl Hoffmann.

On Curvatures of the Spine; their Causes and Treatment. By RICHARD BARWELL, F.R.C.S. Third Edition. London: Macmillan & Co. 1877.—Mr. Barwell's views on spinal curvature first appeared in our columns in 1867 and 1868, and were afterwards published in a small work, of which the third edition is now before us. They are so well known to the profession generally, that criticism is quite superfluous, and nothing remains for us but to congratulate the author on the continued demand for his book. The chief addition in the present edition is an account of Dr. Lewis Sayre's method of treating angular curvature. Mr. Barwell has introduced some minor modifications in carrying this out, for which we must refer the reader to the work itself.

Vierteljahresschrift für Dermatologie und Syphilis (Quarterly Journal of Dermatology and Syphilis). 1877. 3rd Part. Vienna: Braumüller.—This number contains an article on the Elimination of Mercury by the Kidney, by Dr. Guntz, of Dresden; one on a case of Lupus (syphilitic?) combined with Epithelioma, by Dr. Martin, of Elberfeld; a case of Erythema multiforme universale, by Dr. Gustav Behrend, of Berlin; the Vienna Clinic for Syphilis, a retrospect of twenty-five years, by Dr. Sigmund; and an article upon the so-called "Molluscum Contagiosum," by Professor D. Kaposi, of Vienna. This last paper is an elaborate historical review of an affection the precise anatomical conditions of which are still matter of dispute, whilst its peculiar local contagious property marks it out as having no precise counterpart in the range of dermatology. The number concludes with an admirable retrospect of work done in its department during the last year in all quarters of the globe.

Shakspere. By EDWARD DOWDEN, LL.D., Professor of English Literature in the University of Dublin, &c. "Literature Primers." Edited by JOHN GREEN, M.A. London: Macmillan & Co.—A very worthy member of a very valuable series. It is a wonderful shilling's worth of information and criticism on one of the greatest subjects in English literature.

THE LANCET.

LONDON: SATURDAY, DECEMBER 1, 1877.

WE have on two occasions discussed the scientific aspects of hydrophobia as a disease; it remains to offer such remarks as occur to us viewing it from a social standpoint. What has been termed the *ictus* of hydrophobia, though in itself less formidable than the terrible malady which excites so much attention just now, is, nevertheless, a very grave affection; and it is time to speak out clearly on the subject, seeing that appearances betoken a possible epidemic of this distressing and sometimes fatal disorder. We have considered the question of diagnosis as between hydrophobia and its shade, in connexion with actual cases; attention needs to be directed to the latter affection in its more pronounced character as a mental disturbance reacting upon the physical organism, and producing disorder or disease.

It is not necessary to reopen the whole question of mental influences. Suffice it to state briefly that, whatever may be the *modus operandi* of the force in action, the mind may so work upon the body as to give rise to functional, and occasionally, perhaps by the derangement of function, to organic disease. When we remember how closely the nerve force that pervades and energises the organs is allied to that which determines mind-action, how physical exhaustion will produce mental depression, and, conversely, how a strong will may for the moment supply the place of spent bodily strength, it is not difficult to understand that a morbid idea may be the efficient cause of a morbid physical state, and even produce the phenomena of a particular disease of which the mind stands in vivid apprehension. The process to which we point is something widely apart from mere fanciful malingering. Imagination is not an active, or at least a self-conscious, agent in the production. The effect follows the cause through that occult chain of influences which is daily seen to work out astounding and unexplained results in the varied forms of mind derangement. The American physicians have studied this process to better purpose than ourselves, under the description of "reflex insanity," with an outlying province which might be termed "retro-reflex." However that may be, it must, as we have said, be accepted as a postulate that the perpetual, or long-continued, contemplation of a possible contingency so dreadful as the occurrence of hydrophobia after a bite is not unlikely to give rise to a train of symptoms closely resembling, and in their consequence scarcely less formidable than, those of the specific malady. This position will not probably be challenged. The existence of a spurious form of disease simulating hydrophobia is admitted, although many physicians think it exceedingly rare. We are, however, disposed to think the evidence accumulated in connexion with cases detailed in our own columns and elsewhere goes far to prove that morbid phenomena approximating the dreaded disease may be set up in the organism of persons who have, or have not, been bitten by a rabid animal, indifferently, and in that of individuals who have not been bitten at all. In short, it is by no means certainly shown, and exceedingly difficult to believe, that the poison deposited by a tooth or claw can be revived after years of inactivity, and in this way give rise to the symptoms detailed as occurring after a very long interval.

It is of course theoretically possible that particles of disease-product may, like the particles of colouring-matter lodged in the skin in tatooing, remain encysted in the tissues during a prolonged period, and it is barely possible they may be dislodged and taken into the current in the course of a subsequent breaking down of the cicatrix, or softening of the tissues beneath it—when the poison-particles chance to have been projected through the skin, and left in its deep structures. This, we say, is *possible*. And what happens externally in this case may happen in regard to the contagion particles produced in the course of other maladies that are transmitted from patient to patient. The floating "germs" of disease may be received into the orifices of the body, and first entangled, then impacted, until, after long intervals, they are accidentally set free, and taken into the blood-current. The hypothesis must be conceded, and it may account for the otherwise inexplicable appearance of first cases of disease, which give rise to epidemics. Meanwhile, as regards hydrophobia, it is possible and equally probable that, in a considerable proportion of cases, the simple circumstance that attention is directed to a wound received years previously—with that reproduction of a mental state, which is so easy owing to the association of ideas and impressions—constitutes the real cause of the hydrophobia, which is, in fact, a mental phenomenon, not in the sense of being imagined, or existing only in the mind, but mentally induced.

If it be granted, as we think it must be, that a terribly close and deadly counterpart of hydrophobia—if not the disease itself with the pathognomonic spasm—may be called into existence by morbid mental influences, the importance of allaying public anxiety on the subject must be apparent. Unfortunately, it is not possible to propound a single fact in deprecation of the dread which must be awakened by the actual disease. It is, however, not only possible, but incumbent, to say that we believe the prevalence of the malady has been greatly though unintentionally exaggerated. That the widespread fear of hydrophobic dogs has no solid foundation may be gathered from the fact that if the cause was one tithe as active as it is reported to have been during the last ten or twelve months, making the most ample allowance for delayed and unrecognised cases, the results ought at the present moment to be incomparably greater than the wildest of alarmists has dared to represent them. There should be no occasion to assert formally that the bite of a healthy dog is not more likely to produce evil consequences than an ordinary wound. Certainly there can be no ground for the apprehension of hydrophobia in the case of such an injury. It is necessary to take a common sense view of this painful subject; the truth is sufficiently "sensational" without embellishment. There is unfortunately no room to question the accuracy of our impression that the multitude of underbred and neglected dogs, and overfed and pampered pets, have recently suffered

some exceptional disorder which has taken the form of snappishness and sometimes of moodiness and "fits." It is well known that dogs are largely infested with tapeworms, and the presence of these parasites in the lower animals, as in man, is the cause of much general disturbance. Possibly, if veterinary surgeons deemed it worth while to investigate this line of inquiry, they might come upon some useful suggestive facts.

We have already more than once pointed to the measures which seem desirable to check the spread of disease and terror. The number of dogs bred is greatly in excess of the actual requirements. A more rigid enforcement of the tax, and possibly its extension to puppies, would go far to limit the redundancy. Then, again, the ownership of a dog should imply the obligation to take care of it, and it is not too much to require that the name and address of the person keeping one of these animals should be inscribed on a collar. Dogs found without this evidence of proprietorship should be removed to a suitable place of shelter, and if not sold—it would be better to withdraw the option of claiming as lost property—they should be destroyed. These public precautions, with greater care for the health of dogs kept for any purpose, whether companionship or service, would go far to minimise the possibility of mischief. Meanwhile, this panic and unreasoning terror is not only needless, but in a high degree mischievous, and ought to be judiciously repressed.

MEDICAL officers of health who are subsidised by the Local Government Board are taken to task, after a fashion, in the recently published Annual Report of that Board. It would appear that the duty imposed on these officers of reporting annually to their sanitary authorities, and in effect to the Local Government Board, who require that copies of these annual reports should be furnished to it, has not in many instances been carried out in a manner that the Board can approve. The reports in these cases have conveyed so little of the information which the Board most required of the sanitary state of the districts to which they related, that it seemed essential to the Board that more detailed instructions with regard to their preparation, with forms of statistical tables to be appended to them, should be issued. Such instructions, it would further appear, were prepared by the Medical Officer of the Board, and were issued in December. From these instructions, it is to be gathered that the annual reports were defective in not showing—first, what systematic inspections of his district, if any, had been carried out by the medical officer of health for the purpose of making himself well acquainted with all the discernible circumstances likely to affect the public health of the inhabitants; next, in their failure to indicate what measures had been adopted to ascertain the incidence of fatal diseases on particular localities; and, lastly, in the absence from them of information relative to the subjects in regard to their districts which might have received special attention during the year. These several matters all touch cardinal points in the duties which have been imposed upon the medical officers of health by the Local Government Board, and which are set forth in its instructions on the subject; and it is not difficult to infer, from the tone of the Report, that the Board sees reason to believe that the matters referred to form no part of the Annual Report, because in fact the duties to which they relate have not been performed. This inference seems to be confirmed by certain observations of the Board with reference to infectious diseases. It states that there is a too common tendency among medical officers of health to regard themselves as principally, if not exclusively, concerned with actual outbreaks of these diseases "to the neglect, as it seemed to us (the Board), of their still more important function of seeing that their districts were (so far as the action of the Sanitary Authority could secure them), protected against disease by the removal of all conditions likely to injure health."

The defects here pointed out by the Local Government Board in the annual reports of the medical officers of health, and the shortcomings in the performance of their duties which have been indicated, are of importance, not so much with reference to the officials for whom they are intended, as with reference to the Board which notes them; for these asserted defects and shortcomings can only be taken as such when the regulations of the Board are regarded from a point of view diametrically opposed to that from which they were regarded by Mr. STANSFELD, and which was impressed upon sanitary authorities, and still is impressed, by the general inspectors of the Board. This view was most tersely stated by Mr. J. J. HENLEY, one of the Board's general inspectors, in the notable return called for by Mr. STANSFELD in 1875. "It is only," wrote this gentleman, "in those more serious and happily rarer encounters with enemies whose detection and extermination require the insight and the armoury of science, that the intervention of the medical officer of health will be indispensable. In ordinary times and under ordinary circumstances, it is the inspector of nuisances who will fight the sanitary battle." An instructive illustration of this mode of viewing the question is curiously enough found in the recent Report of the Local Government Board. The illustration must, we presume, have found its way into the Report by accident, so incongruous is it with the text of the Report on the subject under consideration. It is furnished by two reports from one of the general inspectors, each concerning a rural sanitary district. In one of these districts the inspector reports on its sanitary progress without any conference with the medical officers of health, but, he observes, "judging from their reports, it appears that the immensely larger share of the work falls to the inspector of nuisances. In cases of defective water-supply and of nuisances arising from overcrowding, the inspector reports directly to them, and they report to the Authority; and in cases of infectious disease he acts under their direction. But in almost all other matters the inspector is the sole agent of the Authority." In the other district the inspector reports that the medical officer of health receives a salary of £75, but the Authority considers this sum too large for the duties he has to perform, and is considering the expediency of paying this officer a retaining fee of £10 per annum, with special fees for any work he may be called upon to do. It would appear, however, that some of the guardians, and especially the clerk, do not accept this view of practically reducing the medical officer of health, in any just meaning of that office, to a nonentity; the clerk

especially would have a medical officer of health "to assist in keeping the inspector of nuisances up to his work" (although it is not quite easy to understand how an officer who is described by the Local Government inspector as a "competent and experienced man, with a knowledge of engineering," should want keeping up), "and would be of great value in instructing the members of the Authority themselves, and in impressing the people with the necessity of sanitary reform." In neither of the reports is any reference made to the medical officer of health having under the Board's regulations any continuous duties both with reference to his district on the one hand, and to his sanitary authority on the other. The Local Government inspector finds a difficulty in "defining precisely" the duties of the sanitary officer of the authorities, and it is obvious that the relative functions of the medical officer of health and inspector of nuisances have been determined according to the view set forth by Mr. HENLEY, the regulations of the Local Government Board notwithstanding.

This view makes the removal of obvious nuisance the head and front of sanitary administration, ignoring wholly the duty which devolves upon the medical officer of health of keeping himself continuously informed of all matters affecting the public health in his district, of advising his Authority in such sense that the different measures carried out for the abatement of nuisance and limitation of diseases shall not be mere isolated and incoherent efforts, but parts of a clearly devised plan for securing the steady and uninterrupted improvement of the district, and of checking the results by observing and reporting the effects on the health of the population. The simpler view, so to speak, has hitherto been inculcated upon sanitary authorities, and the results are reaped in such imperfect organisation and administration as those described in the reports on rural sanitary districts which have been referred to, and in the defects and shortcomings in the reports and work of medical officers of health to which the Local Government Board directs attention.

Now, the importance of the observations made on this subject by that Board in its recent Report consists in the fact that they indicate that the true signification of its own regulations as to the duties of a medical officer of health is beginning to be recognised by it. The task will be difficult for Mr. SCLATER-BOOTH to rectify the existing imperfections of local sanitary administration which have resulted from the views entertained on this subject by his predecessor in office, but he may be sure that he will receive the warm support of the profession if he carries out that larger and more accurate view of a medical officer of health's duties which is adopted in his recent Report. He may rest assured, also, that no amendment of sanitary law will secure efficient sanitary administration, until the relations of the medical officer of health with his sanitary authority, and the performance of his duties, are placed in a sound position.

WE lately noticed some of the results which have been obtained in this country by the use of salicylates in the treatment of acute rheumatism. The subject has been under discussion in Paris, and some of the leading French physicians have expressed their opinions concerning the new agent. On the whole, the results confirm fully those which have been obtained in Germany and in this country. The discussion of the subject was opened at the Académie de Médecine by M. GERMAIN SÉE in an elaborate review of the properties and action of salicylic acid and its salts, and an enthusiastic advocacy of its use in a considerable number of diseases. His experience of its use in rheumatism extended over fifty-two cases, of which, however, only nineteen were febrile. Twelve of the febrile cases had had previous attacks, varying in duration from three weeks to three months. In all, with but one exception, the attacks were cut short by the salicylate in three days. Neither the age of the patient, nor the previous duration of the disease, nor the extent of joint-affection, influenced the result. The only case of failure was one in which the acute rheumatism, beginning in four joints, remained localised to the wrist. He agreed with other observers that the first effect of the action of the salicylates is the cessation of the pains; this occurs in from twelve to eighteen hours; the joint swelling ceases in from one to three days, and motion is easy after the third day. The pyrexia, in some cases as high as 105°, never disappeared before the cessation of the pain. STRICKER—who first called attention to the beneficial effects of the treatment in rheumatic fever—asserted that cases of subacute rheumatism derived little benefit from the treatment, and his observation has received a certain amount of confirmation in this country. The experience of M. SÉE does not, however, corroborate this. Out of thirty-three cases of subacute rheumatism, he stated, there was not a case which was not cured in two or three days. M. HÉRARD confirmed fully the results obtained by M. SÉE, and mentioned one case in which quinine in large doses had failed, but the salicylate treatment effected a rapid cure in two days. M. HARDY, while agreeing in the main with M. SÉE, thought he had been a little too fortunate, and that fifty-two cures out of fifty-three cases was an "unnatural phenomenon in therapeutics," wisely pointing out that practitioners must not be disappointed if they obtain a less successful result. Other confirmatory opinions were expressed by MM. OULMONT, GUENEAU DE MUSSY, FERRAND, BEAUMETZ, DESNOS, BOUCHARDAT, JACCOUD, and LÉPINE, all of whom had obtained, by the use of the salicylates, results which, if not quite so startling as those of M. SÉE, were at least superior to those obtained by any other treatment. M. JACCOUD, however, thought that it had little power over chronic forms of rheumatism; and M. LÉPINE admitted that in some cases it appears to have no effect. Perhaps, however, the most valuable testimony to its use was contained in a report which had been obtained by the military medical authorities, relating to 181 cases of acute rheumatism, in only 7 of which the remedy had no effect, while in 110 of the cases, which were carefully followed, the patient was cured in 94 cases in from twenty-four to sixty hours.

The opinions expressed regarding the details of its administration and effect are of considerable interest. The quantity which M. SÉE believes it is necessary to administer daily is two drachms and a half, to be taken in five doses. This corresponds to about a drachm and a half of salicylic acid. GUENEAU DE MUSSY asserted, however, that equally good results were obtained if a smaller dose was first em-

ployed, and gradually increased up to one and a half or two drachms. LÉPINE, on the other hand, advocates larger doses, of two to three drachms of the salt of soda or ammonia. The large doses are, he believes, borne quite well, if given in divided doses—an opinion which is, on the whole, corroborated by the experience of English physicians. M. SÉE, however, believed that some of the cases of sudden death during its administration, which have been recorded in Russia and Germany, were due to the depressing effect of the large doses employed.

It was admitted by M. SÉE that relapses are more frequent on the salicylate than on any other method of treatment, but this he ascribed entirely to the too early discontinuance of the drug, an opinion which M. HÉRARD also expressed. The salicylate should be continued for ten or fifteen days, and there would be very few relapses. If a relapse did occur after the discontinuance of the treatment, it could be at once cut short by the resumption of the salicylate. In four cases in which the salicylate was purposely omitted early, the alternate occurrence and arrest of rheumatic affection were observed three times. According to M. DESNOS, the rapidity of cure is the cause of the relapses in an accidental manner. Discomfort is so soon at an end that patients will get up, and move about, and expose themselves to cold, and so get a relapse.

Regarding the influence of the salicylate treatment on the complications of rheumatic fever, the conclusions of the French physicians agree with those of previous observers. M. SÉE asserted that complications are far less frequent than under other methods of treatment, for the simple reason that the duration of the disease is so much shorter. The profound anæmia which so often succeeds rheumatism is, in his experience, almost unknown on the salicylate treatment. Recent endocarditis is uninfluenced by it for good or evil, and in cases which came into the hospital during the first three days of the affection, there was not a single instance of either endocarditis or pericarditis. The experience of LÉPINE, HÉRARD, and other observers, agreed with that of M. SÉE. M. JACCOUD pointed out that not only has it no apparent influence on the cardiac, pulmonary, or cerebral complications, but it does not prevent the fever which accompanies a visceral inflammation.

A strong opinion was expressed not only, as we have said, by M. SÉE, but by others of the speakers, that some of the instances of sudden death under salicylate treatment were to be ascribed to the large doses employed. M. EMPIS mentioned such an instance of sudden death, but how far it could be ascribed to the salicylate seemed very doubtful. There is no doubt that the cases of M. JACCOUD, who employed rather large doses, present a remarkably high mortality. Out of sixteen cases treated exclusively by the salicylate method, three died, two from cerebral complications and one from acute alcoholism.

The theory advanced by M. SÉE, in which GUENEAU DE MUSSY agreed, to explain the mechanism of its action, is that the chief action is upon the nervous system, which plays a greater part in the production of the symptoms of rheumatism than is commonly supposed, and thus that the remedy cannot be regarded as a specific for the rheumatic poison.

The only speakers who opposed the use of the new remedy were, as might be expected, those who had never tried it. One of these was M. BOUILLAUD, who refused to believe that acute rheumatism could be cured in three days by anything except a miracle, and who advocated, and still employs, the treatment by bleeding. One or two physicians had met with far less favourable results than the average. M. OULMONT had obtained no distinct result in four out of seven cases, although the treatment was continued for more than a week. But M. SÉE objected that the dose given, amounting to a drachm daily, was too small. M. DESNOS, however, as well as M. LÉPINE, pointed out that there are some cases in which, even in very large doses, the salicylate does not appear to exercise any appreciable influence on the duration of the malady, although they are forms of considerable severity.

Annotations.

"*Ne quid nimis.*"

THE GOLDEN-SQUARE HOSPITAL.

THE facts respecting the Throat Hospital are now almost complete. Within a few months the Patrons (their Royal Highnesses the Prince and Princess of Wales), the President (the Marquis of Bute), the Chairman of the Board of Management (the Honourable General Percy Feilding), the surgeon (Mr. Pugin Thornton), the secretary (Mr. Evans), and the matron have withdrawn their connexion from this hospital in consequence of alleged mismanagement. In July last, at the request of the Prince of Wales, a committee, consisting of the Duke of Grafton, the Earl of Dunmore, Lord Clarendon, and Sir William Gull, was appointed to investigate certain charges which had been brought against the medical superintendent, Dr. Morell Mackenzie. These charges are alleged to have been proved to the satisfaction of the members of the committee, and a report was drawn up to that effect. Unfortunately, this report has not been made public, but a copy of it was presented to the Council of the Hospital Sunday Fund, who thereupon declined to grant the usual award to the hospital. As no public explanation was offered by Dr. Mackenzie, against whom the charge was made, or by the committee of the hospital, it was felt desirable in the interests of the profession, to call upon the members of the medical staff to take some steps either to exonerate themselves, or to remove, if possible, the stigma which had fallen upon the hospital. The members of the medical staff accordingly met at the end of July and passed a resolution implying that they had held a full inquiry and had found that the alleged charges were frivolous and unfounded. This resolution we declined to publish, on the ground that it was a general repudiation of certain charges, the nature of which was not explained. In so doing Dr. Prosser James has more than once charged us with unfairness; but that we were justified in our suspicion is shown by a statement in the letter of Dr. Semple, who, we believe, acted as chairman on the occasion referred to. Dr. Semple states that at the end of July last he met the rest of the medical staff, *when he was led to understand* that the Committee of Inquiry had adjourned *sine die*, and that the charges had been ascertained to be frivolous and unfounded. If this statement may be credited, it follows that there was really no inquiry at all, and the resolution of which so much has been made was not only worthless, but positively misleading. After a delay of several months the medical staff held another inquiry, the only result of which, as we are now informed, was needlessly to exculpate a gen-

tleman against whom nothing, as far as we know, had ever been urged. On this point, too, Dr. Semple is equally explicit. At the second meeting "the only matter discussed was," he affirms, "the statement made by one of the clinical assistants, who exonerated himself from a charge of incompetence and inattention. But I am not sure that he was ever accused, and, if he was not, his exoneration was unnecessary."

It is hardly requisite to state in precise terms the conclusions to be drawn from this prevarication of the staff. In spite of all the representations which have been made in medical journals and in lay papers, and notwithstanding the strong feeling which exists in professional circles, the medical officers of the Golden-square Hospital seem to be totally ignorant of the unenviable position in which they now stand. Serious charges against the chief medical officer to the hospital, and by implication against the committee, are stated to have been proved to the satisfaction of one tribunal, and the decision of this body has been upheld, after careful consideration, by the Council of the Hospital Sunday Fund, who, as almoners of the public, have expressed their disapproval of the mismanagement of the hospital by refusing an award. In the face of all this the medical officers of the hospital are, we repeat, unable or unwilling to perceive that it is a primary duty, which they owe at least to their profession, either to demand the report of the Committee of Inquiry, or to retry the case honestly, openly, and fairly, and to act accordingly.

THE DIFFICULTIES AT THE UNIVERSITY OF LONDON.

THERE are one or two points concerning the state of affairs at the University of London to which we desire to draw further attention. We will not criticise the reply of the Senate to the deputation from the Annual Committee at any length, though it affords more room for criticism than we expected before we saw it *in extenso*. The chief feature we would allude to is one to which we referred a fortnight ago—viz., that the Senate, though it has virtually dropped the Russell-Gurney Act, and has agreed to submit a charter to Convocation, which shall admit women to all degrees, but debarring them from the privilege of becoming members of Convocation, has not committed itself actually to withdrawal from proceedings under the Russell-Gurney Act. The Senate may, if it think fit, take up this Act again—nay, get it amended; and then use it without breaking any more than an implied promise to Convocation. The whole tone of the Chancellor's reply, we are sorry to say, assumes that Convocation must necessarily, after all that has passed, accept the charter that the Senate chooses to send down. This assumption is unfair, and already unfavourable comments are being made on the subject; and we do not wonder thereat, after reading and carefully considering the full reply to the deputation. Those who utter these unfavourable comments may possibly not be persuaded that in the event of Convocation rejecting its charter the Senate will, without more ado, renew its former action (under circumstances more disastrous to the University than on previous occasions), but they feel that the question should be submitted to Convocation uninfluenced by any thought of the possibility of such action on the part of the Senate. Two bodies like the Senate and Convocation can never work together for the good of the University, if one or the other promises or agrees to important measures with a "mental reservation." In no juncture do we remember a greater need for honest policy than in that which troubles the University of London. It is most desirable that when the question of the admission of women, or indeed any other question of serious moment, is submitted by the Senate to Convocation, the latter body should not have its temper irritated by the prospect of the resumption of a proceeding which it has emphatically condemned. We are sorry to say it, but in reality the Russell-Gurney Act hangs as a kind of threat over Convocation, and neither in the interests of the Senate, Convocation, nor of the University is this desirable. A letter was, however, read at that meeting of the Annual Committee, immediately following the interview between its deputation and the Senate, from Dr. Carpenter to Dr. Tilbury Fox, in which it was stated that "the Chancellor quite considered that the adoption by the Senate of the principle of a new Supplemental Charter is an abandonment of the other procedure." But as this letter concerns the Chancellor only, and not the Senate as a whole, we feel bound to ask Convocation to be on the alert, and after the experience of this year we may rest assured that it will not disregard this advice. We are glad to find that Dr. Storrar (the Chairman of Convocation) has declined to call the extraordinary meeting which we ventured to think a few weeks ago was so ill-advised. Dr. Storrar was placed in a difficult position, and the step he has taken will, we think, meet with the approval of the vast majority of the graduates.

THE "PARKES" MUSEUM.

THIS museum, which is to be, we hope, a lasting memorial to the late Dr. Parkes, may be said now to be fairly established. The room apportioned by the Council of University College for the purposes of the museum has a large area, measuring some 3500 square feet, and is well suited for the display of articles. Adjoining the main room is a smaller one, which is appropriated to the library, and already the books number between 200 and 300. This will be one of the most valuable features of the museum, for even now the literature of hygiene and sanitation has become somewhat bulky. Messrs. Smith and Elder, Churchhill, Longmans, Spon, and Lewis have all made valuable contributions, as have also the India Office, the Hygienic Department of the United States Army, and the Brussels Municipality. Pamphlets will be collected and arranged in suitable boxes, and we believe the committee even aims at keeping a selection of advertisements of articles having reference to hygiene. The reports of medical officers of health, of public institutions, and of public bodies to whom is entrusted the control of public sanitation, will be, as far as possible, collected and classified.

The articles exhibited are divided into eight classes, which may be roughly spoken of as (1) Local Engineering, (2) Architecture, (3) Lighting, Warming, and Ventilation, (4) Food, (5) Clothing, (6) Personal, &c., (7) Safety and Rescue, and (8) Professional. The first class will include the subjects of drainage and sewerage, and already many objects are displayed, among which we noticed Mr. Rogers Field's flush tank, and a variety of street gulleys &c. by various makers. In this class will be included pictures, plans, &c., of localities noted for their healthiness or unhealthiness or any climatic peculiarities. There is, for instance, a series of photographs of Davos, which is just at present so much talked of as a health resort.

The architectural division consists at present mainly of plans and designs packed in a series of classified portfolios so that their contents can be displayed without difficulty. An attempt will be made to collect the ground-plans and elevations of all the more important hospitals and asylums in this and other countries. This division includes the "watercloseta," of which many varieties are on show, and notably a most excellent one by Mr. Saxon Snell, whereby the ventilation of every closet directly into

the open air is insured. Classes 3, 4, and 5 speak for themselves. The samples of food are displayed in cases which are the gift of Mr. Twining, of Twickenham, who has been a great friend to the undertaking, and has assisted it equally with contributions and advice.

Class 6, "Personal and Invalid," will include many things of which a medical student ought to have a knowledge. The various aids for overcoming bodily defects will be here exhibited—spectacles, ear-trumpets, artificial teeth, and orthopædic apparatus. This division of the museum, which also will include the transport of sick and wounded, &c., will be, medically, one of the most important, and ought greatly to aid the teaching in many of the medical classes.

Classes 7 and 8 will not be very large. In the former we should hope to find, for example, all that is capable of visual illustration for the prevention of hydrophobia, which just now is a topic attracting unusual attention. The latter class will include apparatus for lessening the dangers of unhealthy trades, &c.

A museum must necessarily be a thing of gradual growth, but the success hitherto achieved is, we trust, an earnest that the Parkes Museum is destined to be an important aid in diffusing a knowledge of hygiene in its widest sense among the various students (medical, architectural, and scientific) who receive their education at University College. If the museum is to prosper a small endowment will be necessary, and this, we should hope, there would be little difficulty in obtaining. A comprehensive prospectus has been printed and circulated at the expense of Mr. Twining, of Twickenham, and this, we are asked to state, will be forwarded to anyone interested in hygiene on application to the secretary of the Parkes Museum, University College.

THE FUNCTIONS OF THE SPINAL CORD.

So much of our knowledge of the physiology of the nervous centres rests upon the results of experimentation on animals that it is well when the rare opportunity offers for observing the effects of injury to these centres in man that the knowledged gained by the former method should be thoroughly put to the test. This has recently happened, and the observations of the results of an injury of one half of the spinal cord have been very thoroughly made out—as thoroughly, indeed, as the circumstances of the case would permit. We refer to the case brought under the notice of the Clinical Society, at its meeting on Nov. 9th, by Dr. Gowers. The case was one of self-inflicted gunshot wound, by which the right half of the spinal cord in the upper cervical region (between the second and third nerves) was bruised, and rendered functionally inactive. The lesion involved the antero-lateral column and the grey matter, but the posterior column was simply swollen by œdema, and the left half of the cord was intact. An injury more exactly unilateral could scarcely be conceived, and as such the case was one of great rarity. The often-quoted example of the Paris gendarme, who lived for four days after a wound in the back of the neck which severed the antero-lateral column and the adjacent grey matter of the right half of the cord, at the level of the sixth cervical vertebra, was one of the earliest cases in which the results of experimentation on animals were in this way confirmed in the human subject. Since then many cases (Poincaré tabulates no fewer than thirty-one) of unilateral spinal lesion (but not limited to traumatic causes) have been recorded; but in a large number the precise locality and extent of the lesion have not been determined for want of post-mortem examination. Hence, Dr. Gowers's case is all the more valuable, and the manner in which it was observed fully justified the high encomiums bestowed by Drs. Broadbent, Burrows, and Althaus. We may briefly recapitulate the conditions that Dr. Gowers observed. There was paralysis of the right arm and leg, that of the lower limb being transitory, and thus affording, as he pointed out, strong confirmation of the view advanced by Vulpian, that the path for the transmission of motor impressions does not only decussate at the medullary pyramids, but at different levels of the cord. The left limbs were not paralysed. Reflex movements were almost abolished in the right leg, but were excessive in the left—facts which were correlated in a striking manner with the modifications observed in sensation on the respective halves of the body. These sensory changes were as follows. On the side of the lesion all the parts below the area supplied by the cervical plexus were the seat of exaggerated sensibility—there was, in fact, a condition of hyperalgesia and hyperæsthesia on this side, whereas on the left side there was but little, if any, change in the tactile sensibility. The sensibility to painful impressions was, however, completely abolished on this side. This retention of tactile sensibility with complete analgesia, when the grey matter of the opposite half of the cord was destroyed, rendered strong support to the views advanced by Schiff, that the paths of common sensation differ from those taken by painful impressions, the former being by the white matter (the posterior columns), the latter travelling through the grey substance. This view of Schiff's, based purely upon experimental grounds, has not yet been very fully adopted. In a limited sense it was the view advanced by the earliest investigators into the functions of the spinal cord—e.g., Charles Bell, whose experiments, however, were not pushed to the extremities that subsequent observers carried them. Bell thought that the posterior columns were the main channels of sensory impulses; and if it be true that they are indeed the path by which tactile impressions travel, part at least of his view may turn out to be correct. Much of the discrepancy that occurs among physiologists with regard to the paths of transmission in the cord depends upon the difficulties in the way of experimentation—the difficulty, for example, of limiting the lesion to particular regions of the substance of the cord. But in this case the lesion was accurately limited; the grey matter was destroyed as well as the antero-lateral column, whilst the posterior column remained nearly intact. It must be noted, however, that it was swollen with œdema. Again, the conclusions arrived at by Brown-Séquard as the result of his extended experiments do not lend countenance to Schiff's theory, for although from these experiments and those of other observers there can be no doubt that different forms of sensation take different paths, yet these are all by way of the grey matter. Thus Brown-Séquard concluded that, at any rate in the cervical and dorsal regions, the path for the sense of heat and cold was by the central parts of the grey matter; that for pain, more diffused, but chiefly in the posterior and lateral portions of the grey matter; and tactile impressions chiefly by the anterior parts. Still, in spite of these conclusions, and of the other objections to Schiff's theory, founded upon the structure of the posterior columns, their termination in the cerebellum, and also upon the preservation of sensibility in posterior spinal sclerosis, it must be confessed that the positive fact presented by Dr. Gowers's case goes far to outweigh any other consideration. Space will only permit a reference to one other interesting feature in this case—viz., the exalted reflex excitability in the analgesic limb, and the diminished reflex excitability in the hyperæsthetic. Variously interpreted as reflex phenomena have been, the view that the higher cerebral centres exert a controlling or inhibitory influence over reflex actions is now generally adopted. Dr. Gowers pointed out that the sensory centre, the thalamus on the left side, would probably (by reason of its commissural connexions with the opposite thalamus) take on increased

functional activity from the right thalamus being deprived of much of its normal stimulation. The same functional heightening which would give rise to hyperæsthesia would at the same time increase its inhibitory influence over reflex movements in the opposite, the right leg. Dr. Broadbent explained the correlation between the sensory and reflex phenomena in a somewhat different manner, regarding each segment of the cord to be a centre for reflex action and for the transmission of sensory impressions. He considered that the closure of the path of sensory impulses led to intensification in the reflex movements on the anæsthetic side.

RELATIVE MERITS OF DIFFERENT FORMS OF STREET PAVING.

An interesting article appears in the current number of the *Quarterly Review*, entitled "Carriages, Roads, and Coaches." With respect to the first, the writer after dwelling on the improved workmanship of foreign manufactures with which our carriage-builders have to compete, utters the following note of warning: "If there is a trade in which export orders are likely to be sent from Australian and other carriage consumers to Paris, Vienna, Brussels, and, perhaps, New York, instead of London and Southampton, it certainly is this one, unless our people supplement good sound work by increased taste in their lines, greater attention to the form and colour of their seats and linings, and a ready eye for every improvement." But the point to us of interest in the article, is the information afforded on the relative merits of street-paving with granite, wood, and asphalte respectively. The reviewer gives us a *précis* of the facts arrived at by Mr. W. Haywood, the engineer and surveyor to the Hon. the Commissioners of Sewers, in a series of reports to that body. The facts are briefly as follows:—During the fifty days (March and April, 1873) between 8 A.M. and 8 P.M., when the observations were taken, 23,286 horses passed over 2033 feet of asphalte (worst gradient 1 in 50), 13,905 horses passed over 1482 feet of granite (worst gradient 1 in 30), and 32,646 passed over 1481 feet of wood (worst gradient 1 in 30). The total number of falls in the fifty days was for the asphalte 1066, granite 719, and wood 542; being for asphalte 1066 accidents in 208,805 miles, for granite 719 in 95,567 miles, and for wood 542 accidents in 179,151 miles travelled. Or, in other words, we have 191 miles travelled on asphalte before a horse falls, 132 on granite, and 330 on wood. During thirty-two days of the experiment, the nature of the accidents was roughly noted as falls on knees, falls on haunches, and complete falls. On the asphalte, falls on the knees were the most frequent, falls on the haunches eight times more numerous than on wood and three times as numerous as on granite, whilst complete falls were four times as numerous both on granite and asphalte as on wood. Whilst this evidence is decidedly in favour of wood-pavement, the question of endurance, and consequently of cost, has still to be considered. In New York the authorities have been obliged to abandon wood-paving and to return to granite. This failure has been caused by the want of endurance of every kind of wooden pavement adopted, the difficulty of keeping the under side dry and the upper in good order. The department of Public Works in New York, in their report for the quarter ended June, 1876, alluding to the failure, attributes it in a great measure to "the combined influences of jobbery and ignorance." Let us hope that the result of our experience may be more fortunate, and that we may, as the reviewer remarks, "learn whether we have been more clever in laying and more fortunate in a climate certainly different from that of New York." On the whole, however, our prospects in this respect as yet appear fairly good, and a verdict may be given "in its favour, provided always the contractor secures an absolutely efficient drainage, and a reliable means of rendering the upper surface impervious to moisture," and, we would add, of securing responsible contractors and rigidly enforcing the terms of contract.

ZYMOTIC DISEASE IN ISLINGTON.

If the population of the parish of Islington has increased since 1871 at the same rate that prevailed between the last two Census enumerations in 1861 and 1871, it must now exceed a quarter of a million of persons. The vestry of Islington is the sanitary authority for this large district and population, and we trust that the recent exceptional fatality of zymotic diseases within the parish is engaging the serious attention of this authority. During the past eight weeks of the current quarter, of 843 deaths from all causes registered in Islington, no less than 210, or 24·9 per cent., were referred to the seven principal zymotic diseases. Scarlet fever has been severely epidemic, causing as many as 109 deaths in the eight weeks, exclusive of those recorded in the Metropolitan Asylum Fever Hospitals, admitted from Islington; 39 were referred to measles, 23 to fever (including typhus, enteric, and simple), 17 to diarrhœa, 12 to whooping-cough, 7 to small-pox, and 3 to diarrhœa. It should be stated that the Highgate Small-pox Hospital and the London Fever Hospital are both situated in Islington, and that of the seven fatal cases of small-pox registered in the district only three were of Islington residents. As regards the deaths in the London Fever Hospital, they were 14 in the eight weeks, but were probably balanced by the deaths of Islington residents from scarlet fever recorded in the Metropolitan Asylum Fever Hospitals at Homerton and Stockwell. It is impossible to examine week by week the death register of Islington without being struck with the fact that there are many streets and groups of streets which invariably supply their undue quota of zymotic deaths, whether the disease epidemic for the time being happen to be small-pox, scarlet fever, measles, or whooping-cough. The same insanitary group of streets in which occurred last year the severe outbreak of small-pox has suffered greatly this year from scarlet fever, and will probably soon suffer severely from measles or whooping cough. It may be hoped that the Islington vestry is not inclined to regard this as inevitable.

THE RELATIONS OF THE PNEUMOGASTRIC NERVES TO PNEUMONIA.

D. J. Steiner, of Halle, gives the results of experiments made by dividing the vagi and their branches. Dr. John Reid, it is well known, found that section of the vagus on one side does not necessarily or even generally induce disease of that lung, but that when both vagi were divided the lungs passed into a condition closely resembling pneumonia. This Reid attributed to the altered rhythm of the respiratory movements, leading to congestion of the capillaries and the effusion of frothy mucus. V. Boddärt, however, several years ago, adduced evidence to show that, as the section of both vagi caused loss of sensibility of the laryngeal mucous membrane and paralysis of the laryngeal muscles, foreign bodies readily gained access to the trachea and bronchia, and produced congestion, inflammation, and the usual results of inflammation. The results of Steiner's experiments seem to be, on the whole, in accordance with those of Boddärt. He, too, finds that isolated section of the pulmonary branches of the vagus has no more tendency to induce pathological changes than occurs during the first two or three days after section of the recurrents. If, however, these pulmonary branches are divided on both sides

within twenty-four hours of each other, severe pneumonia sets in, just as occurs after complete section of the trunks of both vagi. He thinks, therefore, that whilst pneumonia is certainly produced by the entrance of foreign bodies into the lungs, yet that the pulmonary fibres also have a definite function. The influence exerted by these fibres he thinks may be sought for in the altered rhythm of the respiration, which constantly occurs after their section, and in the existence of trophic nerves coursing in the vagus. If after section of both vagi the centric extremity of one nerve be irritated, and the number of respirations be by this means restored to their former frequency, pneumonia no longer occurs. This influence of rhythm on the production of pneumonia is due to the fact that after section of the pulmonary branches the inspirations become less frequent, but much deeper, so that on each respiration being made there is a considerable degree of negative pressure in the lungs, and consequently a strong aspiration of all bodies contained in the mouth, so that foreign bodies and the salivary fluids enter the lungs in abundance. If no food be given, and the animal be kept at rest, no pneumonia occurs.

THE CONSUMPTION OF ALCOHOL IN FRANCE.

SOME interesting observations on the effect of the consumption of different alcoholic drinks on the French population have lately been communicated by M. Lunier to the Académie de Médecine. The chief alcoholic beverages in use in France are wine, cider, beer, brandy, and liqueurs. Wine is, of course, the national drink; during the last ten years the average annual consumption of wine in France was 1,100,000,000 gallons, about twenty-six gallons per head. The amount consumed has oscillated according to the amount produced, but on the whole it has steadily increased during the past fifty years, being now at least double the annual average between the years 1829 and 1833. It is in effect the ordinary drink in seventy-two departments; but in fifteen of these the consumption per head is only from 8 to 17 gallons, while in the fifty-seven other departments the consumption is from 18 to 80 gallons. The consumption of cider is on the decline. During the last twenty years it has diminished from 5½ to 4½ gallons per head. The bad quality of the French cider renders this decrease a matter for congratulation. Brandy is taken to neutralise the prejudicial effect of the cider, and the more cider is drunk the more brandy is consumed. There are only nine departments in which cider is the ordinary drink, and in which the consumption of cider exceeds sixteen gallons per head. These are chiefly in the north-west portion, opposite the cider-drinking region of our own country. The amount of beer drunk has progressively and uniformly increased during the last fifty years. From less than two gallons per head in 1829, it has risen until now nearly five gallons are consumed. Complaints are becoming frequent of the bad quality of much of the beer, and there is reason to believe that before long brandy will be used to "render it digestible." The consumption of spirit has also considerably increased during the last forty years; from being half a gallon per head in 1839, it is now about three-quarters of a gallon. The departments which consume most alcohol are those in which the vine is not cultivated. The contrast between different regions in this respect is very striking. Very little is consumed in any vine-growing district, even in that of Cognac itself.

M. Lunier's conclusions, from the documents he has collected, corroborate those which are now generally recognised, that the prejudicial effect of spirit on the health of the population is far greater than that of wine. Sudden deaths, the consequence of drink, are most frequent in those departments in which spirit is drunk; they are rare where wine only is consumed. Cases of intoxication, sufficient to bring the drinker under the notice of the law, are also five times more frequent in the departments which consume much alcohol than in those in which wine is consumed. So, also, with respect to alcoholic delirium; the number of cases stands in almost direct relation to the amount of spirit consumed, and particularly to the amount of manufactured spirit which is taken. Vendée and Charente present the only exceptions to this rule, and there a large quantity of white wine is taken, almost as dangerous in this respect as brandy.

"CONSCIENTIOUS OBJECTIONS."

THOSE who plead a "conscientious objection" to measures devised for the public safety should be taught that the judgment of the many must override the wilfulness of the few. It cannot be tolerated that objections, alleged to take their rise in conscience, whereas their true cause is egotism and obstinacy, should be allowed to excuse from the obligation of obeying the law. We therefore hail the decision of the Queen's Bench Division in Tebbs *v.* Jones, in which a persistent opponent of vaccination appealed against repeated inflictions of the penalty fixed by the Acts. At the same time the issue is not satisfactory. In reply to counsel, who urged that "there were men who so strongly objected to vaccination, that rather than have their children subjected to it they would go to gaol," the Lord Chief Justice very concisely rejoined, "Then let them go to gaol; but the law must be obeyed." Unfortunately, the strictly legal view of the question makes penalty an *alternative* of the compliance with an obligation imposed in the public interests. Now, it is not in the least degree advantageous to the health of the population that the opponents of vaccination should suffer martyrdom. The unvaccinated child may take the small-pox, and become a source of poison, while the law is avenging the disobedience of its parent. By all means let the offender be punished, but meanwhile provide that the offence shall be extinguished, because in that procedure society has considerably greater interest than in the infliction of the penalty. The law stops short, inasmuch as it does not provide that the child shall be vaccinated, as well as the neglect to apply that measure of prevention punished. Whenever the question of amending the Vaccination Acts is revived, we venture to suggest that the agitation of the anti-vaccinationists should be met by this substantive proposal, in place of the reiteration of principles which the common sense of the intelligent community has finally approved and adopted.

OUT-PATIENTS.

RATHER more than four years ago we advocated with some degree of urgency the desirability of establishing, in connexion with the large tutorial hospitals, a system of out-door relief, according to which some of the sick poor should be treated at their own homes by senior students, under the supervision of properly qualified teachers. In addition to the timely aid that would thereby be afforded at a comparatively small cost to a large number of persons between the pauper class and those who are able to pay even a small fee for medical advice, it was thought that senior students, by treating patients in their homes and under the ordinary conditions of life, would gain an insight into the routine of general practice, and form some acquaintance with many minor ailments which are rarely met with in hospitals.

We are glad to learn, from an able introductory address to a course of Clinical Medicine, delivered at the commencement of the present session, that Dr. Gairdner, of Glasgow, has for some years favoured such a scheme. When connected with the Royal Public Dispensary of Edinburgh, he

and his class regularly visited at their homes the patients who were too ill to attend the dispensary, and he now speaks in high terms of the value of these conferences. "A well-conducted dispensary," says he, "in which the physicians not only see their patients at the hospital, but follow them up at their own homes, and along with their pupils, is a very fruitful and admirable field for true clinical instruction, and one which only requires competent and devoted men to make it at least equal, if not superior, to any other." The advantages of this kind of relief are also very ably set forth in an article on Hospitals and Medical Charities in the *Echo* of Nov. 26th.

The time has evidently arrived when the subject may be again urged upon the attention of the authorities of the large hospitals. Out-door relief has always worked well for obstetric patients, and there seems to be no valid objection to extending the system to all classes of patients.

THE LEAKAGE OF SMALL-POX FROM THE STOCKWELL HOSPITAL.

OUR readers will probably recall to mind that in the course of summer the father of a girl lying ill of small-pox in the Stockwell Hospital, and who had visited her, caught the disease during his visit. He sickened at his own home in Faringdon, and died there. His wife was infected from him, and also a woman who had assisted in laying out the corpse. The former recovered, but the latter died, and her daughter, although escaping the disease herself, became the medium, it is said, of conveying it to four other families. The furniture of the woman who thus lost her life was, after some futile attempt at disinfection, sold, and became the means, it is stated, of conveying the infection into another household. The wife of the purchaser was seized with the malady, was confined prematurely, and died. A child also of this woman was attacked with the disease. In the whole, there were nine cases of small-pox, of which four were fatal. These sad occurrences have awakened no little sympathy for the families of the sufferers in Faringdon, and have given rise to a correspondence with the Local Government Board and the Metropolitan Asylums Board on the regulations of the hospitals of the latter Board with respect to the admission of visitors to see patients suffering from infectious disorders. A strong local feeling appears to prevail that these regulations are lax to the point of seriously endangering the public, as in the instance given, and that they should be made more stringent, especially with regard to warding off danger of infection during the interview and disinfecting the visitor before he leaves the hospital. Moreover, that a register of visitors should be kept, and information of the name and address of each visitor be sent to the medical officer of health of the district from which he comes. The point of view here taken is, we think, fundamentally erroneous. Precautions of the kind contemplated, especially as to disinfection, are the merest futilities, turning the attention from the right tract. Surely there is abundant evidence in existence to show that personal disinfection is a sham. There is only one way in which the danger of infection being spread by means of visitors to an infectious disease hospital can be fully avoided, and that is by excluding them altogether. But to do this cannot for a moment be entertained, for there are even higher human interests than the limitation of the spread of infectious diseases. We deny, however, altogether that the danger of infection spreading from hospitals, such as the Stockwell Hospital, is so great as is assumed by the advocates of greater stringency than now exists in the admission of visitors. The occurrence at Faringdon, however deplorable, is singularly exceptional in the experience of such hospitals. The liability to contract disease by visitors in the wards is less than by visitors in like circumstances in private houses. If such views as we have deprecated were to become common, medical and other care of the contagious sick would only be possible on condition of complete seclusion of the sick and the attendants.

But there is a curious omission in the history of this unfortunate series of occurrences, so far as we yet have it, which calls for explanation from the sanitary authorities of Faringdon, and which should form a subject for investigation by the Local Government Board. No attempt appears to have been made for securing the isolation of any of the cases there. Has Faringdon any means of isolation? Moreover—and this is even more important, as it rests wholly with the local authorities,—not a word is said of such measures having been taken to secure the vaccination and re-vaccination of the persons exposed to danger of infection in the first and successive cases, as the vaccination authority is empowered to take. To close every avenue by which a contagious disease may find its way into a community is known to be impossible, and the law wisely most carefully provides for dealing with the first manifestations of the malady. How came it that, in a town like Faringdon, the infection of small-pox was permitted to spread from the first case as it did?

THE POPULATION AND MORTALITY OF SALFORD.

THE exceptionally rapid growth of Salford since 1871 affords the strongest evidence of the necessity for a more frequent enumeration of the population of towns than once in ten years. The Registrar-General, by his usual method, estimated the population of the borough of Salford at the middle of this year at 141,184, by assuming that the rate of increase which prevailed between 1861 and 1871 has since been maintained. A return of the number of inhabited houses on the rate-books of the borough in the middle of each of the seven years, 1871-7, furnished by the Town Council, having, however, convinced the Registrar-General that the rate of increase since 1871 has far exceeded that which prevailed in the preceding decade, a new estimate, based upon this return, has recently been adopted, which makes the present population of the borough 162,978, or 21,794 more than the estimate previously in use.

As the published official vital statistics of Salford in recent years have been vitiated by this under-estimate of its population, and as the reputed sanitary condition of the borough is not satisfactory, it may be useful briefly to consider its mortality statistics in the past twelve years (during which they have been published by the Registrar-General) with the help of the new and probably more correct estimate of population. Dividing the twelve years, 1865-76, into two periods of six years, it appears that the annual rate of mortality within the borough during the first period, 1865-70, averaged 28·2 per 1000, and in the second period, 1871-6, it was 28·1. It is needless to say that these are excessively high rates, and it is important to bear in mind that in nearly all the others of the twenty largest English towns the rates of mortality in the more recent period show a marked decline from the rates in the earlier period of six years. During these twelve years the annual death-rate in Salford ranged from 25·2 and 25·8 in 1872 and 1869, to 30·4 in 1870, and 31·0 in 1868. Since the beginning of this year the death-rate in Salford has averaged 25·4 per 1000, showing a considerable decline from the average rate in the preceding twelve years, which exceeded 28 per 1000; the zymotic or preventable death-rate in Salford has, however, been equal to 5·1 per 1000 since the beginning of this year, and has exceeded the rate from the same diseases either in

Liverpool or Manchester, which still rank as the two most unhealthy of the largest English towns. If the Salford Town Council have been somewhat unmindful of the excessive rate of mortality in recent years, under the impression that the rate was untrustworthy on account of the under-estimate of population, it is to be hoped that the subject may now command their more serious attention. On one point, moreover, it is necessary to guard the Town Council and ratepayers of Salford against the tempting but fallacious theories of Dr. Tatham, their medical officer of health, who in his last as in previous annual reports, asserts that the high death-rate in the borough is partly due to the high birth-rate and the consequent large proportion of young children in the population of Salford; the fact being that the age distribution of the population of Salford gives a *normal* death-rate more than 1 per 1000 lower than does the average age distribution of the population of England and Wales. It is true that there is an excess of children in the population of Salford, but there is also an excess of young adults, whose mortality should be low, and an exceedingly small proportion of elderly persons, among whom the rate of mortality is still higher than among children. The rate of mortality in Salford is excessive, but the crude death-rate—that is, the mere proportion of deaths to population — understates the true excess of mortality.

TESTS FOR MERCURY IN THE URINE.

THE difficulty of discovering the presence of mercury in the urine depends on the circumstance that it is impossible, when fluid tests are employed, to destroy all organic compounds completely, and yet very small quantities of these seriously interfere with the recognition of the metal. Aug. Mayer has lately tried to effect the destruction of the organic substances by carbonisation and combustion of the empyreumatic vapours with oxide of copper. The proceeding, in fact, resembles that required for elementary organic analysis. The mercury accumulates in the metallic form in the receiver, and is demonstrated by the formation of the iodide. By this mode 0·02 of a milligramme of sublimate added to 500 c.c. of urine can be recognised. The method was found, however, to be tedious and difficult. M. Mayer, therefore, tried another plan, founded on the fact that urine containing the chloride of mercury, on evaporation after the addition of alkali, more or less completely escapes, so that on the addition of an alkali and a little sulphate of soda in the form of metallic mercury, the mercury as it escapes can be retained by asbestos impregnated with nitrate of silver and dried. From this it can be expelled by heating and weighed. By this means from 70 to 80 per cent. of the mercury can be recovered, and from 0·1 to 0·2 milligramme of it be discovered in one litre of urine. In connexion with this, another plan that has recently been suggested by Ludwig, for the obtainment of mercury from animal substances, may be mentioned. It depends on the separation of mercury in a finely divided form by metallic copper or zinc. On this plan 500 c.c. of the urine is acidified with 1 to 2 c.c. of hydrochloric acid warmed to 120° to 130° F., and to this 5 grammes of the metallic powder is added and vigorously stirred in. The mercury is deposited in the course of about half a minute; the powder is then filtered off and dried at the above temperature. On heating, the mercury distils over. Tar-like products are formed at the same time, which are destroyed by passing the vapours over red-hot oxide of copper. The mercury is received into a capillary tube, and converted into iodide of mercury for identification. When the tissues of the body are under examination an hydrochloric acid extract is obtained, and this is treated with potassium chloride and hydrochloric acid, and then exactly neutralised before the addition of the copper powder. The sensitiveness of this method is such that 0·1 milligramme of mercury can be discovered in 500 c.c. of urine, and 1 milligramme in 380 grammes of liver and in 800 of brain-substance. Ludwig was always able to discover mercury in the urine of those who had used mercurial inunctions or subcutaneous injections of albuminate of mercury, on the plan suggested by Bamberger, or who had taken it internally.

"A FEVER-STRICKEN SHIP."

WE are pleased to learn that the ship referred to under the above heading in an annotation last week did not leave the Thames without an efficient sanitary inspection, and that the medical officer of the port sanitary authority did all that lay in his power, by fumigating the cabins, cleansing the tanks, and filling them with fresh water, to diminish the probability of a fresh outbreak occurring after the ship had left the port of London. We regret that, owing to an unfortunate misunderstanding, these facts were not represented in our remarks last week, and now avail ourselves of the opportunity of bearing testimony to the vigilance of the sanitary authority of the port of London. At the same time, whilst acknowledging the utility of the inquiries instituted in these cases by the port sanitary authority, we cannot help repeating the desire which we expressed last week that these inquiries should take a wider range. Had this outbreak taken place in a village, the circumstances would have been inquired into by the Local Government Board, and the report and recommendations of the medical officer of health would have received the attention and support that they deserved, whilst the inquiry would have served as a warning and example in other cases. We do not see why the Board of Trade should not have jurisdiction to institute similar inquiries in the case of vessels arriving in the English ports with fever on board. Year after year cases of typhoid fever in considerable numbers are brought to the Seamen's Hospital by vessels arriving from abroad. Incalculable advantage therefore would be gained if the Board of Trade in these cases would institute an inquiry which might lead to the determination of the causes of any given outbreak, and which should be made widely known to shipowners, so that if the disease arose from defects of construction, they might learn how to protect their own vessels by remedying such defects, or if the epidemic arose from shipping infected water, that source of danger might be indicated and proscribed by an official notice.

MEMORIAL TO DARWIN AT CAMBRIDGE.

THERE being a general feeling in the University of Cambridge that it should not be without a memorial to Mr. Charles Darwin, a meeting was held on Monday last in the Combination Room of Christ's College, of which College Mr. Darwin is a member, to consider the best form which such memorial might take. The meeting was attended by the master of Christ's College (who was in the chair), the masters of St. John's, St. Peter's, and Emmanuel Colleges, Profs. Adams, Paget, Hughes, Humphry, Newton, Stuart, and Fawcett, Messrs. Trotter, Goodman, Niven, and Clark, and many other members of the Senate. The first resolution, proposed by Prof. Humphry, seconded by Prof. Fawcett, and carried unanimously, was "that it is desirable there should be in the University some personal memorial of Charles Darwin, LL.D." It was quite understood that this implied a painting, bust, or statue. The second resolution, proposed by Prof. Newton and seconded by Prof. Stuart, was "that those present do form themselves into a committee

to collect subscriptions for the purpose." It was not by this intended to exclude contributions from those who are not members of the University should any such desire to make them, but that they should not be solicited. Mr. Dew Smith, of Trinity College, was appointed secretary and treasurer, and empowered to receive subscriptions. It was suggested to limit subscriptions to a certain sum, but the suggestion did not seem to find favour.

Mr. Darwin is not only a member of the University himself, but has shown his appreciation of it by sending all his sons to the University; and one is now a Fellow of Trinity College.

ZYMOTIC DISEASES IN TASMANIA.

THE statistics of the colony of Tasmania for the year 1876 will help to demonstrate that, even in new and half-populated countries, sanitary measures cannot be adopted too soon. The public health of the colony is, on the whole, excellent. The birth-rate amounted last year to 30·11 in the 1000; and the death-rate fell from 20·01 in 1875 to 16·57. We find, however, that these figures, though favourable in themselves, might be still more creditable but for the prevalence of preventable diseases. The proportion per cent. of persons who died from zymotic diseases amounted to 23·51 in the year 1875, and 20·25 in 1876. In the former year measles proved exceptionally fatal; in the latter there were many cases of scarlatina. In 1873 and 1874 no deaths were recorded from measles, while in 1875 no less than 129 persons succumbed to this malady; but, in the following year, scarlatina succeeded to measles, causing 97 deaths, while there was but one fatal case of the latter complaint. In the neighbourhood of a locality called Brighton the health officer traced the disease to the defilement of the river water by drainage, sheep-washing, and fellmongering. Indeed, the blue-book before us justly urges that the prevalence of diphtheria and other diseases, produced by accumulated filth and bad drainage, is a disgrace to a civilised community. The rise in the death-rate of Hobart Town and Launceston is unhesitatingly attributed to the air and water-poisoning, which some stringent regulations might easily prevent. The colonial government thus frankly recognises the cause of mischief. Denunciations, published in the blue-book, and supported by the highest authority, should assuredly produce some effect. Indeed, we already hear that measures have been adopted to mitigate existing evils; and it is some encouragement to find the lessons taught in the mother country readily endorsed and followed by a young colony.

"SHOCK."

AN incidental discussion took place recently at the Paris Société de Chirurgie on the accuracy and propriety of the use of the word "shock" as commonly employed to express the cause of the occasional death after serious surgical operations. M. Le Dentu accounted by it for the death of a patient who had lost only a small quantity of blood in the removal of a large tumour from the leg. Even during the operation the signs of extreme general depression were evident, which continued, and he rapidly sank. There was no evidence post mortem of any visceral lesion to which death could be assigned. M. Verneuil suggested that the word "shock" should be altogether discarded, and urged that, as employed in England, the term was neither precise nor accurate, since it was used to include every grave or fatal source of depression occurring during or soon after an operation. It would be better, M. Verneuil thought, frankly to avow ignorance than to mask it by the use of such a word. Lately an attempt has been made to associate all cases of death after accident with the effects of anæmia, relative or absolute, and this theory M. Verneuil thought satisfactory. The loss of blood, absolutely great, or moderate, but grave in its consequences on account of the weakened condition of the individual, was, he thought, a sufficient explanation of most cases of traumatic shock. This view was supported by M. Despres, but opposed by M. Le Dentu, who urged that it would be wrong to suppress the word "shock," for it was impossible to overlook the influence of the nervous system in the consequences of severe wounds. Trifling wounds often do not cause death, even though accompanied by a very extensive loss of blood, while more extensive injuries and operations may be followed by rapid death, even though the loss of blood is trifling or absent. Anæmia will not explain such cases, and it is rational to refer them to the exhaustion of the nervous system produced by a very severe injury. M. Despres did not deny the influence of the nervous system, but believed that its action was chiefly exerted on the phenomena of hæmapoiesis, which it suspended, and that it might thus cause a rapid anæmia without loss of blood. It is certain, however, that the observation must be very superficial which does not recognise an effect independent of the loss of blood and too rapid to be accounted for by interference with the operation of hæmatopoiesis. In this effect the state of the patient's nervous system, apart from the state of his blood, has a very obvious influence. This condition is very well designated by the term "shock," and we do not think the word is so loosely used in this country as M. Verneuil seems to think.

MEDICAL FEES AT INQUESTS.

AN application was recently made, at the instance of the Irish Medical Association, for a legal decision as to whether the City Coroner for Dublin, Dr. White, had power to appoint Dr. Egan as a permanent medical officer at all inquests held by him for the purpose of making post-mortem examinations, and certifying as to the cause of death. It appears that a permanent medical witness has been appointed, who is paid by salary; whereas the Act contemplates that the witnesses shall be taken from the members of the profession generally, shall be legally qualified, and in actual practice at or near the place where the inquest shall be held, and that they shall be paid a fee of one guinea for each examination. Dr. Egan is employed to act as a medical witness at all inquests by the coroner for the city of Dublin, without regard to the locality in which the death might have occurred, receiving a fixed sum of £150 per annum; and the Public Auditor having allowed the amount due to Dr. Egan, the present proceedings were instituted. On Nov. 19th the Chief Justice delivered the judgment of the Court. He refused to make absolute the conditional order for a *certiorari* to quash the decision of the Public Auditor with regard to the payment of medical witnesses at coroners' inquests; but at the same time, although the ratepayers gained by the arrangement in point of law, they did not approve of it, and considered that the witness ought not to be a standing witness.

MIXED NARCOSIS.

DURING the past two or three weeks a novel mode of producing anæsthesia called mixed narcosis (*gemischte narkose*) has been employed by Thiersch, of Leipzig, whereby insensibility to pain may be procured without the total abolition of consciousness. The credit of the discovery is ascribed to Professor Nussbaum, of Munich. Although suitable for all kinds of operations, it is especially serviceable for operations about the mouth and jaws, in which blood is apt to flow into the trachea, or down the œsophagus into the stomach, and subsequently to cause vomiting. In

some cases of removal of the upper jaw lately performed by Thiersch, the patient allowed the blood to accumulate for a while at the back of the pharynx, and then spat it completely out when asked to do so; and we are informed that in one instance the patient watched with evident interest the motion of the saw that was dividing his upper jawbone.

A subcutaneous injection of morphia, from a quarter to half a grain, is given as soon as the patient is placed upon the operating table, and immediately afterwards the administration of chloroform is commenced. After inhalation for about five minutes the operation may usually be begun, but the chloroform must be renewed at intervals. The patients lose all sensibility to pain, but evidently retain a considerable degree of consciousness and control of voluntary movements. Within the last month mixed narcosis has been employed five times successfully, as far as the annihilation of pain is concerned, and without any bad effects.

Next week we shall publish further particulars respecting this interesting method, and give some details of three recent cases of removal of the jaw for malignant disease.

THE MIDDLESEX HOSPITAL.

AT the meeting of the School Committee of the Middlesex Hospital Medical College, held on the 24th November, it was unanimously resolved to establish a lectureship on Dermatology, and Dr. Robert Liveing was appointed to be the first occupant of the chair. Dr. Liveing's previous connexion with the school as tutor and as lecturer on Anatomy earned for him golden opinions among the students who were educated by him, and they, as well as their successors, will be gratified to learn of the new appointment.

THE METROPOLITAN WATER-SUPPLY.

THE Metropolitan Board of Works has approved of the scheme proposed by Sir J. Bazalgette, and Messrs. Bramwell and Easton, for supplying the metropolis with a better supply of potable water, and water for extinguishing fires; and the preliminary measures have already been taken for introducing a Bill into Parliament giving effect to the scheme. The Board agreed to the scheme on the 14th ult., and a motion made at a subsequent meeting of the Board for rescinding the resolution in which the agreement was expressed happily failed. The battle with the water-companies will have yet to be fought in the Parliamentary committee-rooms, and a further battle, no doubt, on the floor of the Legislature, but the case of the Metropolitan Board is so strong, and the sympathy of the metropolis is practically so entirely with the Board, that it ought to be possible for the Bill to come before the Houses and pass in the coming session.

THE GUILDFORD HOSPITAL.

WE are extremely sorry to hear that the Surrey County Hospital, situated in Guildford, has not for some time received adequate monetary support, and that in order to meet the pressing necessities of the institution the managers have been compelled to sell out a portion of their funded property. The significance of such a step will be apparent to everyone cognisant of the difficulties connected with carrying on an establishment depending largely for its existence on voluntary contributions. It is not creditable to the inhabitants of Surrey—one of the wealthiest counties in England—that the chief medical charity of the district, one of proved excellence and usefulness, should be permitted to languish for want of the little timely assistance which would enable it to tide over its pressing obligations and needs. We would earnestly urge the claims of the Surrey County Hospital for increased support on all classes of the community in Surrey, and especially of the gentry and wealthy residents. It is difficult to believe that the latter can be aware of the straits through which a most valuable institution situated in their midst—which is instrumental in relieving annually a large amount of human suffering—is passing.

PHTHISIS IN VICTORIA.

AT one time it was thought that Victoria was a Paradise for consumptive European patients, and a considerable influx of invalids took place to the colony annually. Events, however, teach us that its vaunted immunity from the disease was not founded on facts. From the *Victoria Government Gazette*, received this week, we gather that in the month of August last, 73 deaths from phthisis were registered, while in July the number was only 12 less. Acute diseases of the respiratory organs also caused a mortality of 81 in July, and 88 in August. During the latter month there was a mean daily range of temperature of not less than 19·4°. The medical profession in Victoria, as might be expected, are keenly interested in the reputation for salubrity of their adopted land, and we find that at a late meeting of the Medical Society of Victoria a special committee was appointed to inquire into the relative prevalence of phthisis there as compared with its percentage in the mother country.

THE Yorkshire Association of Medical Officers of Health recently held its annual meeting in the office of the Local Board, at Ilkley, Mr. S. W. North, of York, presiding. Even the beauties of Wharfdale did not tempt the members present from serious business, and an inspection of sewage irrigation and utilisation works seemed to be the one occasion taken advantage of for enjoying the outer air and lovely scenery of the valley. This ended, a discussion on vaccination raised by a paper on "Small-pox, its history in Leeds during the past ten years," by Dr. Goldie, the medical officer of health of that borough; and a paper by Dr. Parsons, the medical officer of health for Goole, on an "Improved method of applying Nessler's test for the estimation of ammonia in water analysis," occupied the Association until dinner time, when the members assumed the pleasant position of being guests of the hospitable medical officer of health for Ilkley, Dr. Scott.

THE Registrar-General computes the mortality in London last week at a higher rate than has prevailed in any week since May last. The deaths numbered 1571, equal to 23·2 per 1000 per annum. Measles is now the reigning epidemic, 82 deaths having been registered as due to the malady last week. The fatality from small-pox was greater than in any week since July, the number of deaths attributed to it being 27, thirteen of these occurring in private dwellings. Of the remainder of the seven principal zymotic diseases, scarlet fever showed the greatest mortality, accounting for 55 deaths, whilst 11 were due to diphtheria, 32 to whooping-cough, 38 to different forms of fever, and 13 to diarrhœa. Diseases of the respiratory organs were more fatal, 409 deaths being placed under this head, against 313 in the previous week.

FROM the seventh annual report of the Caterham Asylum, just presented to the Metropolitan Asylums Board, it appears that the total number of patients treated at the institution during the past year was 2286. The mortality was at the rate of 10·7 per cent. In no single instance had seclusion or mechanical restraint been resorted to, and there was an entire absence of epidemic disease. The medical superintendent speaks highly of the beneficial effects of the Turkish bath on the patients under his care.

A GOOD deal of infectious disease, more especially scarlet fever, appears to prevail in Surbiton and its neighbourhood, and the Improvement Commissioners of the town have been urged into activity. They are about to provide a place, with all necessary apparatus, for the disinfection of bedding, clothes, &c.; one or more cottages for the reception and isolation of infected persons, and an ambulance for the removal of such persons; while the medical officer of health will be supplied with circulars for distribution, in which the public will be warned of the penalties attending the exposure of infected persons or articles. We learn on good authority that in some of the roads in Surbiton scarlet fever has not been absent for a year or more; hence it is apparent that the most energetic measures will be required to stamp out the disease.

THE inaugural address at the opening meeting of the Surgical Society of Ireland for the present session was given on Nov. 23rd by Mr. Robert McDonnell, president of the Royal College of Surgeons. Mr. McDonnell dwelt on the advantages of experimental research, and contrasted an operation at the time of Ambrose Paré, when red-hot knives, hot pitch, and the actual cautery were constantly used, with one of the present day, by means of anæsthetics, Esmarch's bandage, the hypodermic injection of morphia, and carbolised dressing; and observed that the present system was due to a great extent to experiments on animals. Experimental physiology had taught us almost all that we know of inflammation, growth of bone, respiration, the heart's sounds, &c.

THE following is a list of Medical Mayors for 1877-78.—John Petty Aldridge, M.D., for Dorchester; James Atkinson, L.R.C.P. Edin., for Crewe; Benjamin Barrow, F.R.C.S. Eng., for Ryde; Walter William Miller, M.D., for Eye; William Paley, M.D., for Peterborough; Richard Henry Prior, L.R.C.P. Lond., for St. Albans; David Thompson, L.R.C.P. Edin., for Launceston; John Tibbits, M.D., for Warwick; Francis Harrison Walmsley, M.R.C.S. Eng., for Salford; and William Warrener, M.D., for Hertford.

THE Society of Apothecaries have decided to offer two prizes for competition by young women under twenty years of age, in the science of Botany. The prizes will consist of a gold medal and a silver medal and books, to be awarded to the first and second candidates respectively, in order of merit. The Rev. M. J. Berkeley (the examiner for the prizes given by the Society to medical students) will conduct the examinations, the date of which and the conditions of competition will be published shortly.

IN the Admiral's despatch respecting the encounter between the *Shah* and the *Huascar*, which excited much interest a few months ago, the names of Surgeons Allen and Sibbald are specially mentioned, in conjunction with those of other officers, as "deserving of their Lordships' favourable consideration, for their prompt volunteering for, and efficient services with, the torpedo expedition."

THE Manchester and Salford Sanitary Association have made arrangements for the delivery of a series of lectures intended to interest the working classes in matters relating to health. The first lecture, at which the Bishop of Manchester presided, was given by Dr. Ransome, on the subject of "Pure Air, and its Influence upon Health."

WE have been asked to call attention to an alteration in the dates on which the Harveian Lectures will be delivered by Dr. Grailly Hewitt. The days are as follows:—Thursday, Dec. 6; Wednesday, Dec. 12; and Thursday, Dec. 30.

AT the recent Manchester assizes a midwife named Cartledge, fifty years of age, was found guilty of having caused the death of a woman in an attempt to procure abortion, and sentenced to death. The jury strongly recommended her to mercy on account of her age and former respectability.

WITHIN the last few weeks four cases of ovariotomy have been performed in Dublin, two of which have terminated fatally.

DR. THOMAS STEVENSON has succeeded Dr. A. S. Taylor in the Chair of Medical Jurisprudence at Guy's Hospital.

DECLINE IN THE RATE OF INCREASE OF LUNACY IN ENGLAND.

THERE are few subjects on which more reckless and random assertions are continually made than upon the increase of lunacy in England. It is a subject the consideration of which must, to a great extent, depend on statistics; and, as figures are frequently misunderstood, and not always reliable, it is often difficult to refute statements made by persons in a position to be well-informed on the subject. It should, too, above all, be borne in mind that all available statistics on the subject relate to known or reported cases of lunacy rather than the actual cases existing, and, therefore, that the figures are subject to the disturbing influence of an increasing tendency to discover and report existing cases. According to the recently-issued report of the Commissioners in Lunacy, the total number of persons of unsound mind in England and Wales, certified and reported on 1st January last, was 66,636, showing an increase of 1720 upon those at the commencement of 1876. Of the total number of lunatics at the beginning of this year, 88·6 per cent. were classed as pauper, and 11·4 per cent. as private. The proportion of pauper to total lunatics is constantly increasing. The proportion of total lunatics to the English population has also continuously, and almost steadily, increased from year to year since 1859, the first of the series dealt with in the reports of the Commissioners in Lunacy. In 1859, the average number of lunatics to 10,000 of the population was 18·7, or 17·4 among males and 19·9 among females. On 1st January last, the proportion had increased to 27·1 per 10,000, the male and female rates being 25·2 and 28·9. Now, the general increase in the nineteen years was equal to 45 per cent., after due allowance for increase of population. It must be remembered that this increase is not the increase of lunatics in asylums, but the increase of all persons of unsound mind, whether private or pauper patients, whether living in asylums, workhouses, or with relatives. Before examining the rate of increase a little more closely, we may note that the rate of increase of lunacy was almost the same in each sex; the increase during the nineteen years in the proportion of lunacy was equal to 44·7 per cent. among males, and 45·8 among females. The rate of increase of lunacy having thus been marked and continuous, let us now consider whether the rate of increase is an increasing or a decreasing rate. During the first five years of the period under notice, the annual rate of lunacy to population averaged 19·7 per 10,000 persons living; in the following five years the average rate was 22·3, and in the five years ending 1873 it further rose to 24·9, while the average rate of the four last returns, ending 1st January last, was equal to 26·7. The average annual rate of increase in the second quinquienniad, upon the first, was equal to 2·6 per cent., the average increase in the third upon the second declined to 2·2 per cent., and during the past four years the annual increase upon the five preceding years has further declined to 1·8 per cent. Thus, while it is impossible to gainsay the marked increase of lunacy during the past nineteen years, there is cause for satisfaction in the fact that the rate of increase is a declining rate. It should be one of the main objects of sanitation to turn this declining rate of increase

into an actually decreasing rate. This will never be done until the provision for asylum treatment of all lunatics, imbeciles, and idiots has thoroughly overtaken the present pressing demand. The rapid decline in the rate of mortality among the imbeciles treated in the asylums at Leavesden and Caterham should alone supply the necessary incentive for the extension of this system beyond the metropolitan area.

MEDICAL ASPECTS OF THE WAR.

IT is not necessary to go further than St. Petersburg to study one of the most important portions of the operations of the Russian Red Cross Society during the present war. We have at different times described some of the provisions made there for the wounded and the arrival of sanitary trains. The hospital accommodation for the sick and wounded of the army on the Danube available in the military district of St. Petersburg now amounts to 2000, and it is being largely supplemented by convalescent hospitals. Four hundred beds for convalescents have been installed in the barracks of the Grenadiers of the Guard, and 200 in the barracks of the Izmaïlovsky regiment, transformed into hospitals for the moment. The convalescents are organised in companies, each of which is to contain 1500 men. Each convalescent has an allowance of seventeen copecs (equal to about fivepence halfpenny) for his food, which consists of a ration of soup, a pound of meat, oatmeal, bread, kvas, and two rations of tea. The sanitary superintendence of the hospitals is under the charge of physicians, and their domestic and ward management is cared for by sisters of charity, while ladies of the Red Cross Society take it in turns to read to and write letters for the patients. An infirmary of ten beds, organised by private effort, is attached to the barracks of the Grenadiers. The convalescents are divided into four categories, (1) those who are definitively released from service, (2) those who are to be sent on leave to their homes, (3) those who will be attached for the time being to corps stationed in the vicinity of the hospitals, and (4) those who will return as speedy as possible to the seat of war. The direction of these convalescent hospitals has been confided by the Empress to the Countess S. Bobrinsky, aided by the Princess Vasiltchekow and Madame Polovtsew.

Sanitary train No. 12 arrived at St. Petersburg on the 20th ult., bringing two generals, six other officers, and 150 soldiers of the Imperial Guard, who had been wounded at Gorny Doubnik.

The number of committees formed in Russia for the relief of the necessitous families of soldiers amounts to 216.

The regular publication of returns of the sick and wounded of the Russian army seems to have recommenced, although the returns which are now appearing refer to an earlier period of the year. The following return is in continuation of those we gave last week:—

On the 28th August the number of patients in the army hospitals at the seat of war was 11,291, of whom 3008 were suffering from wounds. From the 28th August to the 4th Sept. the admissions were 13,613, 4999 of these cases being wounds; the discharges 12,531 (recovered 2222, transported into the interior 10,088, of whom wounded 3368, deaths 221). On the 4th September there remained under treatment 12,373 (wounded 4007). The percentage of the different categories of patients was as follows:—Wounded 32·38, fevers 22·35, diarrhœas 9·82, venereal disease 9·82, various inflammations 6·06, typhus (? typhoid) 6·02, catarrhs, 3·28, diseases of the eye 3·25, scurvy 0·05.

From the 28th June (the date of arrival of the first train with sick and wounded from the seat of war) to the 27th October—a period of four months—47,100 sick and wounded were received at Yassy, and sent from thence into the interior of Russia. Three deaths only had occurred among this number of patients in the trains during the journey from Roumania to Yassy.

Five hundred sisters of charity are now engaged in attendance upon the sick and wounded of the Russian army, 325 of them at the seat of war. But seven sisters have given up their work and returned home, two on account of sickness, one recalled by her mother, and four "à cause de leur caractère difficile." About 150 women are under training in the hospitals of the capital to fit them for the mission of a sister of charity.

Dr. Landenberger, who was sent to Roumania by the Queen of Wurtemberg in charge of the Wurtemberg sanitary train, has submitted a report to her Majesty, in which he speaks in the highest terms of the state of the Roumanian military hospitals and medico-sanitary service, as well as of the healthy condition of the forces of the principality. *The Times* correspondent, writing from the Russian head-quarters in Bulgaria, under date November 19th, reports the arrival of 100 new ambulance waggons there, the excellent condition of the troops before Plevna, and the small amount of sickness among them. Drs. Douglas and Vachell left head-quarters on their way to St. Petersburg on Nov. 17th.

Mr. Thomas Gibson Bowles, writing from Constantinople on the 14th November, appeals to the English public on behalf of the Stafford House Committee. He says:—"We have now in European and Asiatic Turkey (including those sent out by Lord Blantyre) forty-two surgeons, who come to the wounded men, as a Turkish official has said to me, 'like angels from Heaven.' We have established five permanent hospitals and five ambulances, besides a transport service, which is absolutely necessary in order to bring the wounded off the field to the hospitals, two railway transports and five soup-kitchens, which have already supplied rations to more than 2000 wounded, and for all this work we have provided the surgical stores and appliances required to keep it supplied. The recent battles in Armenia have very unexpectedly and very urgently increased the need of help in that quarter. Thousands of wounded are at Erzeroum and in the neighbourhood with quite inadequate appliances for their relief, and a large proportion of them must inevitably go for days or even for weeks with their wounds undressed, and I fear that of these a large proportion must die of wounds, which, if attended to at once, would be easily dealt with. We have done what we can. Four Stafford House surgeons with stores and appliances are now on their way hence to Trebizonde, and will, we know, be of the greatest assistance. But this assistance is quite inadequate; yet it is all we can withdraw from the other parts of the seat of war. Our means are limited, and all we can do is to apply them in every direction as far as they will go. I would, therefore, urgently appeal to the public for further and immediate help to enable us to extend the sphere of our action. I was yesterday present at the arrival here of a train of four hundred wounded from Adrianople, and I saw the patience with which these poor fellows—splendid, brawny, broad-backed men, all of them—supported their sufferings, and the touching gratitude they exhibited towards the Stafford House surgeons who accompanied them. Could the subscribers to the fund have seen this, as I did, they would have felt well repaid for what they have given out of their abundance to alleviate the sufferings of men who, month after month, have lain shoeless and shelterless on the ground, and who, on a pound of black bread a day, have made that heroic defence of their country which has astonished Europe."

Lord Blantyre has favoured us with the following extract of a letter from M. Zohrab. His Lordship does not refer to the reported death of Dr. Guppy mentioned in our last impression, and which, we may venture now to hope, is untrue. The report came by telegram from Constantinople.

The English Consul to Lord Blantyre.

"Erzeroum, Nov. 4th, 1877.

"The hospital works well. It is quite full, and Drs. Featherstonhaugh and Guppy are almost daily performing amputations. We had over 250 wounded sent in to us in October, and as many were discharged cured. This is very encouraging, and will, I am sure, be most gratifying to your lordship. It is a real pleasure to me to visit the hospital; the men seem so happy, and seemed so pleased to see English faces. This hospital will not only add to England's fame in this country, but a strong affection for the English will be engrafted in the hearts of the peasants. The gratitude of the wounded is well demonstrated by those discharged invariably finding their way to the Consulate before going away to express their gratitude.

"The two surgeons I expect to-day will have plenty of

work here, for the town is full of wounded, and I am sure the authorities will avail of their services. I shall see on their arrival to their immediate employment in the most useful manner. I hope Mr. Kennett has sent with them the charpie I asked for; we need it and oiled silk very much. We also need funds, for, though we have some on hand, if we are cut off, it will be difficult to get more, and what we have will not last long."

THE FULHAM HOSPITAL.

WE have received and read with interest the Report by T. C. Fox, M.B., the Medical Superintendent of the Fulham Small-pox Hospital, detailing the work carried on by it, in connexion with the recent epidemic of small-pox. This hospital and the one at Deptford were hastily built by the Metropolitan Asylums Board in view of the rapid extension of the small-pox epidemic at the latter end of 1876, and consequent great pressure on the space and overcrowding of the other hospitals of the Board. The Fulham Hospital stands on about seven acres of ground, and consists of isolated administrative and residential, kitchen and stores, and laundry and engine-house blocks, flanked by ten one-storied pavilions, five on either side, planned to accommodate 300 patients. The whole is connected by open corridors, and a mortuary stands in one corner of the grounds, which are being suitably laid out. The Deptford Hospital is constructed on a similar plan, but has thirteen pavilions, to hold 390 beds. The pavilions in both buildings are designed to afford 2000 cubic feet to each bed, and are constructed of brick piers, with intervening lengths composed of galvanised iron without, wooden panels within, and felt between. Water-closets, scullories, and bath-rooms are attached. The wards are ventilated after a modification of Mr. Tobin's principle, but although presenting many excellences, we ourselves hardly think the requirements of perfect ward ventilation are met—viz., a perfect supply of fresh air without draughts. Lastly, the hospital is excellently situated both as regards soil and isolation; but the builders, apparently undeterred by the nature of the hospital, are rapidly approaching the gates, as at Stockwell.

Mr. Fox reports that he admitted 326 cases, of which 19 per cent. were unvaccinated, and 16 per cent. had four or more marks of some sort. The total mortality in all classes was 14·72 per cent.—if we mistake not, considerably below the average in this epidemic. This comparatively low rate is explicable on several grounds detailed in the report, but principally by the advantage derived from the absence of overcrowding, and the fine airy wards. The mortality amongst the unvaccinated was 43·54 per cent., amongst the vaccinated 7·6 per cent.; but it is to be remembered that amongst these so-called vaccinated people were many who showed the merest traces of vaccination. No death occurred amongst those having four or more cicatrices, and, indeed, only one death (in a brewer's man from superadded pleurisy) amongst those possessing two or more marks. Tables are appended to the body of the report showing the numbers of children who escape vaccination under the present Acts, and the reason why they escape. We find, also, facts as to the relative frequency of admission and fatality at different ages in the vaccinated and unvaccinated, which also show that the protection afforded by vaccination is in direct proportion to the number of cicatrices, especially when of good quality. The gradual dying out of the protective influence of vaccination with increasing years is likewise illustrated, and the necessity of revaccination at puberty insisted on. An able report is concluded by remarks urging upon the attention of the managers the necessity of further measures before small-pox can be effectively dealt with, such as isolation, accommodation for the non-pauper classes, effectual co-operation on the part of the parishes, compulsory registration of infectious disease, additional powers for compulsory removal of small-pox cases, and vaccination and revaccination by medical men in houses, courts, and districts on the outbreak of the disease. The hospital and its officials have done excellent public service.

THE COVENTRY SEWAGE WORKS.

THE provisions of the Rivers Pollution Prevention Act, which has lately come into operation, have assisted to develop what is called the "Coventry process," under the auspices of the Rivers Purification Association. These works afford a practical demonstration of the fact that town sewage can be, without difficulty and without heavy expense, purified by chemical treatment, so carried on as not to create a nuisance. The process consists in applying a cheap salt of alumina (derived from treating the shale of the coal and ironstone formations with sulphuric acid) combined with lime.

The Association above referred to in May last entered into a contract with the corporation of Coventry to purify the sewage of that city by this process. The river Sherbourne, into which all the sewage flows, is an exceedingly small stream, and in summer would be nearly dry if no water entered it from the sewage works. It is therefore necessary to purify the water to a much higher standard than that required in the case of large rivers. This high standard appears to have been successfully maintained since the works were in operation, and the contract with the corporation makes the Association responsible for any breach of the laws as to the quality of the effluent water.

The sludge produced at the works is stated by Dr. Voelcker to be theoretically worth 16*s.* 9½*d.* per ton, but has at present only a market value of 5*s.* 6*d.* to 8*s.* 4*d.* per ton, because its value is not as yet fully recognised by the farmers of the district. Coventry has a population of 40,000 persons, a water-supply of about 25 gallons per head per day, and 5000 water-closets; and the refuse liquids from a large number of silk-dyeing works, breweries, oil and varnish works, &c., find their way into the sewers. The daily volume of sewage and dry matter amounts to 2,000,000 gallons, or 50 gallons per head per day, which includes, however, the subsoil water that leaks into the sewers. The effluent water, after filtration through land, contains only 0·6 of albuminoid ammonia in a million parts. The cost for chemicals is, comparatively speaking, very small, and 2000 tons of partially dried sludge have been disposed of since the works came into operation. The plan appears to deserve attention at the hands of those interested in the difficult question of sewage disposal.

Correspondence.

"Audi alteram partem."

THE
MEDICAL ASPECTS OF TOTAL ABSTINENCE.

To the Editor of THE LANCET.

SIR,—Dr. Braxton Hicks, in his interesting letter on the use of alcohol, in THE LANCET of Nov. 17th, alludes to the position of the systematic water-drinker at convivial meetings as one of possible difficulty. In this sentiment I entirely agree, and I much doubt whether the practice, suggested by a recent writer in a well-known public journal, of having cups of tea, milk, or barley-water handed round by the butler at one of the dinner-parties of our day would promote much cordial and sympathetic good-feeling among the guests. Apart, however, from this view of the matter, I am inclined to think, from observation and experience, that the sensations of one who sits down to a grand dinner in the evening, and takes thereat a few glasses of some one sound wine, will be more agreeable and comforting an hour or two after the repast than those of him who is content to wash down all the mixed and savoury food with cold water or tea. There is an ancient saying that good eating requires good drinking, and the physiological *rationale* of this is well given by that accomplished physiologist and physician, the late Dr. Brinton, at p. 337 of his book on Diseases of the Stomach. The diluted alcohol, taken with

a large and varied meal, "checks alike digestion and decomposition, and enables the canal to void its contents after a very scanty absorption of their nutritious principles into the bloodvessels." I have heard people say that a small glass of brandy taken at a public dinner is a sure preventive of evil consequences, and Brinton's idea gives the explanation of the principle on which this desirable result is attained.

Let the abstainer consider that temperance in drinking should go with temperance in eating, and then the chances are in his favour in the end. For my own part I have not the least belief in any strength-giving power possessed by alcohol. If a man has a good appetite and digestion without taking alcohol, he will do well to abstain from it; on the other hand, if a glass of wine promotes the desire for food and the power of digesting, then it will be well to take it.

Alcohol in the middle of the day is best avoided, and sherry in the forenoon is little better than a slow and insidious poison.

Lately I have had a man in the West London Hospital with rather severe limited pneumonia—a hungry man, always ready for food, and by occupation a ground man, or excavator. The convalescence of this patient went on so much more rapidly than I had expected that I felt sure he must be of temperate habits; and, on inquiry, I found that for ten months he had been an abstainer, as he found he got through his laborious work better without beer than with it.

I am, Sir, yours &c.,

JOHN C. THOROWGOOD, M.D.

Welbeck-street, W., November, 1877.

To the Editor of THE LANCET.

SIR,—May I crave space in your valuable journal to say a few words on the subject of the action of alcohol.

I believe it has been satisfactorily proved that the actual work done by muscular tissue is not at the expense of the tissue itself, but that force for the most part is the result of chemical change wrought through the medium of the living tissues upon the materials supplied by the blood.

Hosts of careful experiments have proved that the *term of life* of a muscle cell or fibril is not much influenced by its degree of activity, any more than man's life, as a whole, is curtailed or increased by active or sedentary habits, provided these are not excessive in degree and so excite disease; indeed, the balance of evidence (as far as longevity is concerned) is in favour of healthy (i.e., considerable) bodily and mental activity.

Now, I can easily believe that many persons may have, lying in store, a large quantity of force-generating material, which, however, the cells are unable to make the best use of, owing, perhaps, to a feeble heart or to imperfect aeration; and, if I understand the action of a dietetic dose of alcohol aright, it is to strengthen the beat of the heart and bring the flow of blood in the capillaries up to perfection (and no further), and thus to lay the *maximum* amount of force-producing store at the service of the living tissues, and thereby enable them to do their *maximum* of *healthy* work.

Thus, if alcohol serves to place more of this latent power at the service of the engines of the body, surely it may do much good and ward off much evil by preventing the products of imperfect chemical change from accumulating in the blood and thus setting up disease.

I am, Sir, yours truly,

Brighton, Nov. 27, 1877. J. M. E. SCATLIFF, M.D.

To the Editor of THE LANCET.

SIR,—Those of your readers who, like the writer, are sceptical regarding the dietetic merits of alcohol, must have been interested by the clear and candid letter from Mr. R. B. Carter in your issue for October 27th. But there is one item of information that I am specially wishful to obtain. Did Mr. Carter on the several occasions on which he gave up the use of alcohol take a little more food than he was wont to take, or any change of food, under the impression that he required something to make up for the want of alcohol? This question has suggested itself because all the symptoms of which Mr. Carter makes mention are such as I should expect to result from taking a little too much food in the circumstances. Were a patient who had been in the way of taking a little alcohol regularly to tell me that he intended to try to do without it, I should say, "You must for a time take more rest and less food, otherwise you will most likely suffer. The organic functions will be less active for the time when stimulation is no longer employed. You will not be able to make good use of the same amount of food; you may digest as much, but it will not be all turned to good account in the way of generating force or building up structure. The system will consequently become overloaded; the blood will become impure, and you may have foul tongue, loaded urine, and drowsiness after dinner (the symptoms from which Mr. Carter suffered). You must, therefore, for two or three weeks, take less food and allow yourself more rest." I might add: "All will come right in a short time after you have got made up for past overdrawing, and you may expect then to find that you are better without the alcohol than with it."

I remain, Sir, yours, &c.,

Cluny-hill, Forres, N.B., November, 1877. A. MUNRO.

THE GOLDEN-SQUARE HOSPITAL.

To the Editor of THE LANCET.

SIR,—I protest emphatically against your statement that I have *elected myself* "the champion of this hospital and its administration." No words could more completely misrepresent my position. I have never been a member of the Committee or taken any part in the administration, over which I have no control, and for the actions of which I am no more responsible than you yourself. My duties and responsibilities alike begin and end with the treatment of my own patients. As already stated, my letter printed in your issue of the 10th inst. was elicited by your own challenge to the members of the staff to break silence. That letter brought about your own admission that you had for three months been in possession of their resolution, and thus that you alone were responsible for their silence after August 4th. Anyone who doubts this has only to refer to your numbers for the 10th and 17th inst.

Having thus disclaimed the honour you would thrust upon me, I pass to the other points raised in your remarks this week. And first as to the Committee of Inquiry and its report. In my first letter a doubt was expressed as to the existence of any such report. Since then I have read in your columns that the report in question was read at the meeting of the Hospital Sunday Fund Committee. From this I conclude that the document cannot concern the staff, since they have not had any communication from its authors. If it reflected on them, surely, in common honesty, they should have seen it before it was circulated. If, however, it does not concern them, why should you call upon them to answer a document they have never seen? If it is of such interest to the profession, why do you not print it? This would be a relief to the staff, as they would then see whether it concerns them or not. Individually, I should be glad to afford you any explanation of anything relating to my own clinic, for which I alone am responsible, and to which medical visitors are always welcome. On the other hand, if that report only concerns the Committee of Management, let them answer it. If, as you seem to think, it condemns them, they have of course received a copy, according to the invariable practice in such cases. It seems strange for THE LANCET to hold a physician to an institution responsible for the acts of its governing body. Are the staff of St. Bartholomew's or St. Thomas's Hospital responsible for the acts of the treasurer? Is a parish doctor responsible for the board of guardians or the relieving officer?

Your remaining remarks I reply to *seriatim*.

First, you say "doubts were entertained regarding the *bona fides* of an inquiry which the staff alleged they had instituted." By whom were these doubts entertained? I did not know that you, or any competent critic, had expressed such doubts. Surely THE LANCET will not be the first thus indiscriminately to slander a body of professional men. You say the staff "attempt to dispel these doubts by holding a second meeting and passing a fresh resolution."

This is not quite correct. The staff investigated the charges made respecting certain operations, and resolved unanimously that they were properly performed. They sent their decision to you, that the profession might learn their opinion on a question so entirely within their province. You "object to the relevancy of this explanation." Are you aware that the only grave *medical* charges against Dr. Mackenzie arose out of these very operations?

You say "it is incumbent upon them to show that they investigated the other charges." They did not think so, but confined themselves to the medical charges.

You seem anxious "to be informed whether the witnesses examined by the medical officers were the same as those who gave evidence before the Committee of Inquiry." Certainly not, considering that the Committee of Inquiry only examined, as I am informed, two witnesses—viz., the exporter and the ex-matron. It was scarcely likely that their evidence would enlighten the staff on the details of these operations, or that their opinions as to the manner in which they were performed would interest the profession.

Once more you ask, "Why were the other charges, which, so far as the administration of the charity is concerned, are most important, not considered?" I reply that, however important it might be to the charity to know why a porter was dismissed, or why a matron gave notice, the staff did not feel called upon to spend their time in investigating such problems.

Finally, you say I have "been asked to state publicly the nature of the inquiry which the medical officers conducted, and to explain the grounds on which they based a judgment different from that of the Committee of Inquiry." Pray, Sir, by whom have I been asked this? I was not aware that you had requested it, or would have complied with your wish. It is true I saw a letter in your columns, saying I did "not appear to understand the position of the staff," proclaiming that it is "childish" on my part "to protest against the entire staff being implicated" in a private dispute, and asking some such question. But as I did not know why the writer should address his questions to me, and as he professed to give you information as to the doings of the staff, I felt justified in leaving him to satisfy his curiosity by an appeal to those who had supplied him with his version of other matters. Though quite ready to reply to THE LANCET as a recognised organ of professional opinion, I can scarcely be expected to notice every letter which your numerous correspondents may address to you. As to the judgment of the staff differing from that of the Committee of Inquiry, it is only necessary to say that the members of the staff should be able to form an opinion on the medical charges, and to repeat that up to this date they do not know what conclusion the Committee of Inquiry have agreed upon.

I am, Sir, your obedient servant,

Dean-street, Park-lane, Nov. 27th. PROSSER JAMES.

To the Editor of THE LANCET.

SIR,—With very great reluctance I offer a few remarks on the present dissensions now existing among some parties connected with the above hospital. It must be sufficiently obvious from the correspondence published in the journals that these dissensions had their origin in a private misunderstanding. Of the origin of this misunderstanding I really knew and know nothing, and I was never consulted by either of the two gentlemen concerned.

It was only by accident that I learned, during the course of the last summer, that a Committee of Inquiry had been appointed to investigate some charges springing originally out of the misunderstanding referred to. I was not asked to attend that committee, and, in fact, I did not know where it met until I was told of it in conversation.

At the end of July I met the rest of the medical staff of the hospital, when I was led to understand that the Committee of Inquiry had adjourned *sine die*, that the charges had been ascertained to be frivolous and unfounded, and that, in fact, the matter was at an end, and I was thoroughly rejoiced to endorse what I then believed to be the decision of the committee.

I was therefore quite surprised to find, on casually taking up a daily newspaper about a month ago, that the Committee of Inquiry had framed a report unfavourable to the management of the hospital; but up to the present time I have neither seen that report nor read the evidence on which it is said to be founded.

Another meeting was held lately by the staff, but the only matter discussed was the statement made by one of the clinical assistants, who exonerated himself from a charge of incompetence and inattention. But I am not sure that he was ever accused, and, if he was not, his exoneration was unnecessary.

I have determined to take no further action in a matter in which I am not personally concerned, until I know all the facts of the case; but, like a neutral country in an international war, I should be too happy to help in settling the terms of peace when the belligerents require, or are willing to accept, such friendly mediation.

I remain, Sir, yours faithfully,

Torrington-square, Nov. 26th, 1877. E. H. SEMPLE.

To the Editor of THE LANCET.

SIR,—My attention has been called to an article in a paper called the *Medical Examiner*, dated November 22nd, relative to the Hospital for Diseases of the Throat. Judging from the style of the article in question I presume that the paper is not one likely to have sufficient weight either with the medical profession or the public at large to induce you to notice it. As, however, allusion has been made to me by name, I shall feel obliged if you will allow me the opportunity of stating in your columns that if I do not take the trouble to contradict the various assertions made in the *Medical Examiner* respecting myself, it is by no means because I admit the truth of them.

As I have been spoken of as "the complainant" with reference to the late Court of Inquiry which was convened by the Marquis of Bute (the then president of the hospital), I beg to state that the late vice-chairman was as much the complainant as myself.

I may add that I retired from the Committee of Management at a special meeting held previous to the regular meeting, when the election of a chairman for the following year should have been made, and a few days afterwards I received a communication which purported to come from the new chairman, and conveying a unanimous vote of thanks to me for my services as chairman. I presume, however, that I must now consider it to have been a hoax.

I beg to apologise for having encroached even thus much on your valuable space,

And remain, Sir, your obedient servant,

November 26th, 1877. P. FIELDING, Major-General.

PIGMENTARY SYPHILIDE.

To the Editor of THE LANCET.

SIR,—In the report in THE LANCET for Nov. 17th of Dr. Drysdale's paper on Pigmentary Syphilide, read to the Medical Society, that gentleman says that this affection is seen only in persons infected with syphilis, consequently it may fairly be classified as a phenomenon of that disease. It is remarkable that Dr. Drysdale should have been able to collect no less than fourteen cases of this affection from among forty-one patients under his care—an affection so rarely seen by others that it is pretty generally denied admission among syphilitic affections, notwithstanding that Hardy, of Paris, described it twenty years ago. Moreover, I cannot help thinking that Dr. Drysdale, when enlarging on Hardy's excellent description of this staining of the skin, has unwittingly included some of the dull-brown mottlings of the lower extremities met with in young women with disordered menstruation, and perhaps, also, certain cases of leukoderma.

As Dr. Drysdale has done me the honour to mention that I recommended iron for patients suffering from this affection, I may, perhaps, be allowed to explain why I do so. Some years ago, when the female out-patients of the Lock Hospital were under my care, I searched carefully for this disorder of the skin, in the abundant field which that charge afforded to me. Now and then a case (about one per cent. of the syphilitic women), came before me which exactly corresponded to Hardy's description. But, unfor-

tunately, the syphilitic infection was not always co-existent; for I found this peculiar mottling equally well defined in patients quite free from syphilis, past or present. One condition I did find to be constant—anæmia, or rather abundance of the white blood-corpuscles. Hence, in my experience, iron and other invigorants are valuable means for removing this peculiar discoloration. These observations, connected with the fact that mercury has no apparent effect upon these spots, have led me to consider this affection not to be syphilitic, but the consequence of the impoverished nutrition which is often seen in syphilis.

I am, Sir, &c.,

Wimpole-street, Nov. 17th. BERKELEY HILL.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—I venture to offer a few remarks on this mysterious and very fatal disease.

The prevalence of hydrophobia would give it the character of an epidemic. What renders a dog's saliva so poisonous is a profound mystery, but if we consider a few physiological facts in the dog's constitution it may help us a little to unravel the mystery. In the first place, a dog does not perspire; the skin, therefore, does not carry off the effete matter elaborated in the body, as is the case in man, the horse, and other animals. To compensate for this want of cuticular perspiration, there is an increased flow of saliva when a dog is using active exercise.

A dog is a carnivorous animal. Now a flesh diet gives the bite a dark colour, and the feculent matter passed is dark, and by exposure to the air becomes darker still. But in the dog the feculent matter passed becomes white by exposure, showing, I think, that the liver does not take up so much of the different substances that are unfit for circulation; hence the saliva is strongly charged with morbid matter, which may partly account for its poisonous nature. I therefore think that dogs that are not well exercised are more liable to the disease.

If a dog bites through clothing there is much less chance of the wound producing hydrophobia, for the clothing takes up the saliva before it reaches the skin. If a person is bitten on the bare skin, the chance of the disease coming on at some after period is much greater. I should therefore advise gloves to be worn. Every adult should carry in his pocket a small piece of caustic in a quill, not only for his own use, but to apply to any person who is bitten. As the absorption of the saliva is rapid, the wound ought to be immediately sucked, and the blood spat out of the mouth; there is no danger to the person sucking the wound, for the saliva on the tongue resists the absorption of the poison. The saliva of the dog must be introduced into the skin by a wound; in other words, inoculation must take place to produce the disease. Immediately after the wound is sucked caustic should be applied freely; the sore that is made ought to be left to heal slowly. The caustic not only destroys the saliva of the dog, if any be left in the wound, but it likewise sets up inflammation which draws the action from the absorbents to the surface.

The medical treatment of the bite of a mad dog is of more use at the time of the bite than it is when the disease has ripened itself into an attack of hydrophobia, the pathology of which is so little known and the treatment still less so. I think it would be very advisable to give our consideration to the period of incubation, although this is uncertain from the different periods that elapse between the bite and the appearance of hydrophobia. According to some of the cases that have lately been mentioned in the papers the period varies from a twelvemonth to a few weeks. The treatment during incubation could only be tried with any degree of certainty on a person who is known to have been bitten by a rabid dog. I think that, with the knowledge we possess of the efficacy of the treatment of some cases by hypodermic injection, we might apply this means of introducing some powerful agent every day for a certain period, which, I think, would overpower the virulence of the poison.

If caustic is applied half an hour after the bite I doubt if the remedy is preventive, for the absorbents are so quickly set into action when any extraneous matter is introduced into the skin.

Maude-grove, Nov. 18. W. G. CARPENTER, F.R.C.S.

To the Editor of THE LANCET.

SIR,—In hydrophobia I think it is a mistake to assert that the disease can only follow a wound inflicted by the tooth of a rabid animal. A soldier of this garrison has just died from the disease, following the scratch of a cat's claw. No doubt at the time the claw had saliva on it, but if it is dogmatically laid down that the "tooth alone" can be the medium, such scratches may be disregarded. I refrain from giving particulars, as I had nothing to do with the case.

Yours truly,

St. David's Villa, Brockhurst, Nov. 19th, 1877. THOS. COWEY.

HOW SMALL-POX IS SPREAD.

To the Editor of THE LANCET.

SIR,—On Friday, the 16th inst., I sent up, in the parish ambulance, a rather severe case of variola to the Stockwell Hospital. On Sunday the wife of the patient determined to see him, if allowed to do so. She presented herself at the hospital, and without having to go through any form or ceremony, she was permitted to go into the ward in which her husband lay, and which, as she stated to me, contained "many worse cases of the disease than that of her husband." She left the hospital, but thought she should like to go in again a little later in the afternoon. She again presented herself, and was again admitted. Having left the hospital she travelled by omnibus to London-bridge, and thence by train to Woolwich.

I may be unfeeling, but I cannot help thinking that the permission to visit other than extreme cases ought to be withheld, otherwise why are medical men morally called upon to exercise so much care? If the authorities do not require more caution to be exercised towards the community at large, surely the house-surgeon or house-physician at a place like Stockwell Small-pox Hospital is allowed to prevent friends of the patients walking in and out as they think fit. The rule is reported to be "That not more than one friend of a patient shall be in the ward at one time."

Yours faithfully,

Plumstead, Nov. 20th, 1877. T. WARNER LACEY.

FOREIGN MEDICAL STUDY.

To the Editor of THE LANCET.

SIR,—As a brief supplement to your article (Oct. 20th) "On the Advantages and Opportunities of Foreign Study," the following notes by one who has spent a few months in the Paris hospitals may be of use to some of your readers.

In addition to the general hospitals, Hôtel Dieu, Lariboisière, La Pitié, La Charité, &c., there are in Paris certain special establishments to which no parallel can be found elsewhere in Europe. Chief among these are the Salpétrière and the Hôpital St. Louis.

The Salpétrière is a huge establishment—a kind of workhouse infirmary and lunatic asylum all in one. In the department of mental diseases the lectures and clinical demonstrations of Dr. Aug. Voisin are admirable, while in M. Charcot's wards is an immense field for the study of diseases of the nervous system.

The Hôpital St. Louis (700 beds) is entirely devoted to skin diseases and syphilis, with the exception of three or four surgical wards. Here diseases of the skin may be daily studied, not only in the crowded out-patient department, but also in the wards, where the treatment of four different physicians may be compared. In the syphilitic wards the clinical demonstrations of M. Fournier are admirable. Attached to the hospital is a museum of models of skin diseases, which for accuracy of detail are unrivalled.

In general clinical medicine Dr. Hardy's lectures and demonstrations at La Charité are unsurpassed.

Among specialties we have Fauvel for the laryngoscope;

Miot in aural surgery; Wecker, Galegowski, and Panas in Ophthalmology (the second of whom excels especially as a teacher); Simon and Archembault in diseases of children.

At almost all the general hospitals eminent teachers, both of clinical medicine and surgery, are to be found. At the Collége de France are the lecture rooms and laboratories of the greatest French teachers of physiology (Claude Bernard and Marey), histology (Ranvier), chemistry (Berthollet); while at the Ecole de Médecine are numerous courses of lectures in every department of medicine and surgery.

In this brief and necessarily very imperfect sketch, only a few of the leading cliniques have been mentioned, but it should be remembered that all the courses of lectures, clinical demonstrations, and even laboratory practice in Paris, in addition to many other excellences, have this special recommendation, that they are entirely free of charge. This remark does not, of course, apply to special courses of anatomy or operative surgery, &c.

Yours, &c.,

St. Bartholomew's Hospital, Oct. 31st. R. H. A. SCHOFIELD.

Medical News.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine and received certificates to practise on Nov. 22nd:—

Bigger, Samuel Ferguson, Albert-street.
Crick, Samuel Arthur, Cosley, near Leicester.
Evans, Charles Walter, Arlington-road.
Rugg, James Foster, Middle-street, Brighton.

The following gentlemen also passed the Primary Professional Examination:—

John Mitford Atkinson and Joseph Tregellas Fox, London Hospital; James William Evans, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND. — Of the thirteen candidates examined for the final Fellowship of the College, on the 22nd, 23rd, and 24th ult., ten were successful, and will be admitted Fellows at the next meeting of the Council.—*Erratum:* The name of R. W. White, of Guy's Hospital, was accidentally omitted from the list, published last week, of gentlemen who passed the primary examination for the Fellowship (not the first part of the primary examination in Anatomy and Physiology, as then stated) of the College on the 20th ult.

THE ROYAL ACADEMY.—Professor John Marshall, F.R.S., commenced his fifth course of lectures on Anatomy at Burlington House on Wednesday last. These lectures, which are delivered on Mondays, Wednesdays, and Fridays, at 8 o'clock, will be brought to a close on the 17th inst.

VACCINATION GRANTS.—The following gentlemen have received, from the Local Government Board, awards for efficient vaccination in their respective districts:—Richard S. Smallman, B.A. and M.B., Wigan, £97 6*s.*; Dr. James Glen, Middlesbro' Union, £36 17*s.*; Dr. Henry B. Wood, Cranbrook Union, £8 9*s.*

HEALTH OF DUBLIN.—During the week ending the 17th of November, the deaths registered represented an annual mortality of 28·1 in every 1000 of the population, and as there is no epidemic with the exception of measles, which is somewhat prevalent, the death-rate is much beyond what it ought to be. The Corporation are supposed to undertake the carrying out of certain sanitary regulations which would promote the health and comfort of the citizens; and if these matters were properly looked after, we should undoubtedly find that the present high mortality would not long continue.

DONATIONS, &C., TO MEDICAL CHARITIES. — University College Hospital has received £2000 under the will of the late Mr. George Moore, of Whitehall, Cumberland; and £100 under that of Miss Emily Cooper, of Hampstead. Under the will of Mr. Britton Balley, the following sums have been apportioned—viz., £1000 to the Sussex County Hospital, £1000 to the Hospital for Sick Children; £750 to the Brighton and Hove Dispensary, and £750 to the Lying-in Institution, all at Brighton. Mr. Alexander Easson, of Dundee, has given £1000 to the Royal Infirmary in that town. The Worcester Infirmary has received £500 under the will of Miss Ann Porter.

Medical Appointments.

APPLECK, J. O., M.D., has been appointed an Assistant-Physician to the Royal Infirmary, Edinburgh, vice Brackenridge, appointed an Ordinary Physician.

ASHENDEN, C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Hastings Urban Sanitary District, at £150 for one year, and Public Analyst, at £50 per annum.

ATKINSON, A. J., M.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the North and Seal Districts, and the Workhouse, of the Farnham Union, Surrey, vice Clark, resigned.

BARTON, G. K., M.D., F.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Leadenham District of the Sleaford Union, and for the Fulbeck District of the Newark Union, vice Smith, resigned.

BATEMAN, S., M.D., C.M., has been appointed House-Surgeon to the North Riding Infirmary, Middlesborough-on-Tees, vice Anderson, resigned.

BLACKMAN, J. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the North Landport District of the Portsmouth Royal Dockyard Medical Benefit Society, vice Smart, resigned.

BUTLER, A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Evershot District of the Beaminster Union, and Medical Officer of Health for the No. 3 Sub-district of the Beaminster Rural Sanitary District, vice Clapcott, resigned.

CHEVALLIER, B., M.D., M.R.C.P.L., has been appointed Medical Superintendent of the Borough of Ipswich Lunatic Asylum, vice Long, resigned.

CLAPP, R., L.R.C.P.I., M.R.C.S.E., has been appointed House-Surgeon to the Weston-super-Mare Hospital and Dispensary, vice Alford, resigned.

CLARKE, J., Jun., L.K.Q.C.P.I., L.R.C.S.I., & L.M. has been appointed Medical Officer, Public Vaccinator, &c., for the Ballieborough Dispensary District of the Ballieborough Union, co. Cavan, vice J. Clarke, L.K.Q.C.P.I. & L.M., resigned.

CRISP, N., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Keynsham Union Workhouse, vice Colthurst, resigned.

CROWTHER, W. H., L.S.A., has been appointed Assistant Medical Officer to the Acton General Dispensary.

FLEMING, H. B., L.M., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Western Division of the Omagh Dispensary District of the Omagh Union, co. Tyrone, vice Love, resigned.

FORSYTH, A., M.D., C.M., has been appointed Visiting Surgeon for Greenwich, under the Contagious Diseases Acts (Women).

GUTTERIDGE, E. P., M.R.C.S.E. & L.M., L.S.A.L., has been reappointed Medical Officer of Health for the Maldon Port Sanitary District, at £10 10*s.* for one year.

HAMILTON, D. J., L.R.C.P.Ed., F.R.C.S.Ed., has been appointed Pathologist to the Royal Infirmary, Edinburgh, vice Wyllie, resigned.

HANDS, A., L.R.C.P.L., M.R.C.S.E., has been reappointed Medical Officer for the Wednesfield District of the Wolverhampton Union, and his salary increased from £40 to £60 per annum.

HIND, A., L.R.C.S.Ed. & L.M., L.S.A.L., has been appointed Medical Officer for the Highbury District of the Barnstaple Union, vice Ley, resigned.

HOPKINS, J. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the No. 1 District of the Leeds Union, vice Libbey, resigned.

JACKSON, J., L.R.C.P.Ed. & L.M., L.R.C.S.Ed., has been reappointed Medical Officer of Health for the Denholme Gate Urban Sanitary District, Yorkshire, at £75 per annum for three years.

JAMES, Dr. A., has been appointed Lecturer on Physiology at the School of Medicine, Edinburgh, vice Smart, resigned.

LAPPER, Mr., has been appointed to the Chair of Chemistry in the Ledwich School of Medicine, Dublin, vice Griffiths, deceased.

LAWSON, R., M.B., C.M., has been appointed Resident Medical Superintendent and Secretary to the Wonford House Hospital for the Insane, near Exeter, vice Lyle, resigned.

LEESON, A. E., M.D., has been appointed a Visiting Physician to the Margaret-street Infirmary for Consumption and Diseases of the Chest, vice Gill, resigned.

LYLE, T., M.D., L.R.C.P.L., has been appointed Consulting Physician to the Wonford House Hospital for the Insane, near Exeter, on resigning as Physician.

MACDONALD, Dr. A., has arranged to deliver his Course of Lectures on Midwifery and the Diseases of Women and Children at the School of Medicine, Edinburgh, during the Winter Session, vice Duncan, resigned.

MACKENZIE, D., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Parish of Annan, Dumfriesshire, vice Little, deceased.

MARR, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator for the Ponteland District of the Castle-Ward Union, Northumberland, vice Gallway, resigned.

MILLER, A. G., M.D., has been appointed an Assistant-Surgeon to the Royal Infirmary, Edinburgh.

MOORE, W., M.B., C.M., has been appointed House-Surgeon to the Hospital, and Surgeon to the Dispensary, Ayr Hospital, vice Kay, resigned.

PATMORE, T. D., M.R.C.S.E., L.R.C.P., has been appointed Assistant Medical Officer to the Central London Sick Asylum District Asylum, Cleveland-street, vice Horner, resigned.

PYE, J. P., M.D., C.M., Professor of Materia Medica, has been appointed Professor of Anatomy and Physiology at Queen's College, Galway, vice Cleland, appointed Professor of Anatomy at the University of Glasgow.

RICHARDS, J., L.K.Q.C.P.I., has been appointed Physician to the Carnarvonshire and Anglesey Infirmary, Bangor.

RUSSELL, A. J. F., L.R.C.S.I., L.K.Q.C.P.I., & L.M., has been appointed Medical Officer to the Workhouse and District of the Union of Worksop; also Public Vaccinator and Medical Officer of Health for Worksop; also Certifying Surgeon under the Factory Act.

SEWARD, W. J., M.B., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer in the Female Department of the Middlesex Lunatic Asylum, Colney Hatch, vice Skelton, resigned.

SHARPE, A., M.D., L.R.C.S.Ed., has been appointed Visiting Surgeon for Woolwich, under the Contagious Diseases Acts (Women), vice Stuart, resigned.

SPEED, H. A., M.R.C.S.E., has been appointed Medical Officer for the Deptford North District of the Greenwich Union, vice Henderson, whose appointment has expired.

STEEL, S. H., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for the Abergavenny Urban Sanitary District, at £60 for one year.

STURTON, H. W. S., M.R.C.S.E., L.S.A.L., has been appointed Assistant Visiting Surgeon for Greenwich, under the Contagious Diseases Acts (Women).

THOMPSON, J. A. B., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Stamfordham District of the Castle-Ward Union, Northumberland, vice Torrance, resigned.

TURNER, W., M.B., F.R.S., Professor of Anatomy, has been appointed Dean of the Faculty of Medicine in the University of Edinburgh, vice Balfour, resigned.

VACHELL, H. R., M.B., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to St. Peter's Hospital, Berners-street, vice Simon, whose appointment has expired.

WEST, R. E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse, and Medical Officer and Public Vaccinator for the Tavistock District of the Tavistock Union, vice Sleman, deceased.

WEBSTER, H. W., M.D., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Superintendent of the new St. George Union Infirmary, in the Fulham-road, at £400 per annum, detached residence, &c.

Births, Marriages, and Deaths.

BIRTHS.

BRAMWELL.—On the 16th ult., at Osborne-terrace, Newcastle-on-Tyne, the wife of Byrom Bramwell, M.D., of a son.

BREWER.—On the 25th ult., at Queen's-road, Dalston, the wife of Alexander Hampton Brewer, Surgeon, of a daughter.

DURANT.—On the 19th ult., at Cheltenham, the wife of E. Durant, L.R.C.P.Ed., of a son.

ELLIOT.—On the 14th ult., at Bodenham, the wife of John Elliot, M.R.C.S.E., of a son.

SAUNDERSON.—On the 24th ult., at Springfield Lodge, Philipstown, King's County, the wife of Robert Saunderson, M.D., of a daughter.

TAYLER.—On the 25th ult., at Lewisham High-road, the wife of Dr. Francis T. Tayler, of a daughter.

WOOD.—On the 25th ult., at Seymour-street, Hyde-park, the wife of Henry Thorold Wood, M.R.C.S.E., of a son.

MARRIAGES.

LUSCOMBE—ROBINSON.—On the 22nd ult., at the Parish Church, Esher, by the Rev. S. L. Warren, Rector, William Edmund Luscombe, L.R.C.P.Ed., M.R.C.S.E., second son of the late Rev. Edmund Peard Luscombe, M.A., of Melbecks, Richmond, Yorks, to Catherine, fifth daughter of the late Edward Robinson, Esq., of Milbourne Lodge, Esher, Surrey.

NICHOLS—HARRISON.—On the 17th ult., at St. Luke's, Chelsea, John Moore Nichols, L.R.C.S.I., to Margaret Mary, daughter of the late Thomas Harrison, Esq.

DEATHS.

BURMAN.—On the 20th ult., at Wath-on-Dearne, Yorkshire, James Burman, Surgeon, in practice prior to 1815, aged 82.

DRURY.—On the 24th ult., at Mentone, John Thomas Cockin Drury, M.D., aged 44.

HALLETT.—On the 19th September, at Buninyong, Victoria, Australia, John James Hallett, M.R.C.S.E., aged 69.

MARSON.—On the 15th ult., at Worthing, James Furness Marson, F.R.C.S.E.

MOORE.—On the 17th ult., at Queen-street, Lancaster, Percy St. Aubyn Daniel Moore, only son of Dr. J. Daniel Moore, M.D., F.L.S., aged 7 years.

REID.—On the 13th ult., at Blue Anchor-road, Bermondsey, Matthew Reid, M.R.C.P.Ed., aged 29.

TERREWEST.—On the 16th ult., at Messingham, Lincolnshire, William Terrewest, M.D., aged 72.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*]

BOOKS ETC. RECEIVED.

Dr. W. T. Gairdner: Lectures on Practical Teaching and Clinical Instruction.
W. Thomson on Phthisis.
Sir T. Erskine May: Democracy in Europe. Vols. I. & II.
C. Heath: A Course of Operative Surgery. Part V.
John S. Storr: Russia as she is.
Transactions of the Clinical Society of London. Vol. X.
Veterinary Obstetrics. Part XI.
Dr. J. Blair on Paying Wards in Public Hospitals.
C. G. Wheeler: Modern Organic Chemistry.
Dr. J. L. W. Thudichum on Polypus in the Nose.
Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Tome XIII.
The Leisure Hour. December.
Sunday at Home. December.
Good Words. December.
Sunday Magazine. December.
Popular Science Monthly. December.
R. B. Carter: Defects of Vision.
The Official Handbook of the National Training School for Cookery.
C. Puller: School History of Rome.
C. H. Burnett: A Treatise on the Ear.

Notes, Short Comments, and Answers to Correspondents.

HÆMATOZOA IN CHINA.

DR. PATRICK MANSON, the Customs medical officer at the port of Amoy, has contributed a very interesting report on this subject to the sixth part of the "China Customs Gazette," published by order of the Inspector-General. The prevalence of entozoa among dogs in China is well known, and Dr. Manson describes five species occupying the alimentary canal—viz., two kinds of taenia, a threadworm inhabiting the small intestine, and two round worms like the human lumbricus. In addition to these is the heart-worm, variously named Filaria canis cordis, Filaria inimitis, and a new species, not hitherto described as existing in the dog in China, the Filaria sanguinolenta. The Filaria inimitis is said to exist in about one-half of all the dogs in China, whether native or foreign, and anyone can satisfy himself on this point by microscopic examination with a low power of the blood of the animals. A table of 40 specimens examined is given, the results of which show that 19 out of the number were affected, five of these very abundantly. As many as five of these creatures are sometimes seen in one small field of the microscope; but it appears that many of the dogs thus infested "seem," according to the report, "in no way inconvenienced by their guests, have attained a good old age, and are fat and well nourished." If a dog is killed or dies, the parents of these microscopic filariæ are found coiled up in the right ventricle of the heart, sometimes extending through the bicuspid valve into the auricle, and even into the superior vena cava, and very generally through the semilunar valves far into the pulmonary artery and its branches. Sometimes three or four only are found, whereas in other cases the heart and pulmonary artery are actually stuffed with them. The largest number counted by Dr. Manson was 41, and in this instance some, as he reports, probably escaped detection. On unravelling the ball in which they are encased, the female is found to be the larger of the two, measuring from eight to thirteen inches in length by one-thirtieth of an inch in diameter, the male being five to seven inches long, with a diameter of one-fortieth of an inch. The general proportion is one male to two females. The author describes minutely the anatomy of the worm, and observes that, as animals affected with them are invariably shortwinded, sportsmen, before purchasing dogs in China, should have their blood examined microscopically by a competent person. The Filaria sanguinolenta seems to be equally prevalent, inasmuch as out of 13 dogs examined by the reporter, 9 contained the living animal in different stages of development. The author is at variance with Dr. Lewis as to the condition of the embryo, and its differential diagnosis with the Filaria inimitis. The habitat of the Filaria sanguinolenta appear to be the walls of the aorta, the walls of the œsophagus, the loose cellular tissue in front of the latter, and the pleura; never elsewhere. The mature female worm is from three to four inches in length by about one-tenth of an inch in breadth; whereas the male is about an inch shorter, and can be distinguished by a simple incurvation of the tail. This variety of the filaria is oviparous, whereas the Filaria inimitis is viviparous. The physical characters of each are sufficient to distinguish them. Thus the Filaria inimitis is in colour milky-white, in length never under six inches, viviparous, and having the venous system as its habitat. The Filaria sanguinolenta is reddish-pink, never over four inches in length, oviparous, and having as its habitat the arterial system and alimentary canal. The diseases produced by the latter variety are, according to Dr. Manson, stricture of the œsophagus, pleurisy, and paralysis of the hind-legs.

Juvenis.—Write to the Dean of the Faculty of Medicine for the regulations.

INTERNAL URETHROTOMY.

To the Editor of THE LANCET.

SIR,—In your annotation on Internal Urethrotomy in your journal of last week, in which you have done me the honour of mentioning my name, you strongly point out "that a very large number of urethral strictures are best and most safely treated by means of patient and systematic simple dilatation." You may, Sir, perhaps be pleased to learn, in support of your advice, that out of 431 consecutive cases of stricture of which I took notes, I found it necessary to relegate 11 only to internal urethrotomy. I have performed the operation thirty-five times, in all, without losing a single patient; and, although I am very satisfied with the results of the operation, I would not lightly recommend it, remembering always as I do "that in the urethra even a scratch may cause death" (Gouley).

Internal urethrotomy is fast finding favour with surgeons, and it would be a very great pity if anyone were, through an indiscriminate performance of it, to bring discredit on what I regard as one of the most valuable operations in surgery.

Your obedient servant,
Portman-square, Nov. 28th, 1877. W. F. THEVAN.

THE EUCALYPTUS.

THE merits of this tree would seem, from some statements made at a meeting of the California Academy of Sciences, not to be confined to its absorptive properties, and its value in combating malaria. Eucalyptus shingles are said to be fire-proof. A tree of this species was exposed to the fire in San Francisco which occurred in 1876, and it is still in a flourishing condition. All varieties of the eucalyptus are stated to be possessed of this valuable quality.

Mr. James should consult a surgeon.

A MAN WITH MANY HEADS.

THE French newspapers have indulged lately in sundry violent attacks against the English press, and have consequently received a somewhat stern rebuke from some of our leading journals. The reckless indifference to fact which characterises many French publications has been duly pointed out by some of our contemporaries, but is scarcely worthy of grave comment. What can be said, for instance, of the startling paragraph solemnly published by *Le Citoyen*, a Norman paper, in which we are quoted as witnesses! According to this most trustworthy organ, a man, named Victor Pietan, was condemned to death for murder. The prison surgeon was, however, so impressed with the abnormal condition of this culprit that several other medical men were called in to examine him; but though all agreed there was something strange about the man, there was no reason to claim a reprieve in his favour. "Accordingly," and here we must quote the *Citoyen*, "the culprit was conveyed to the place of execution, strapped down under the guillotine, and his head duly severed from his body; but it had scarcely fallen into the basket placed in front of the knife when another head sprang up in its place upon the shoulders. As quick as thought the knife was hoisted and dropped again, and the second head fell. But this did not suffice, for a third head now made its appearance. The executioner, irritated with so much obstinacy, began to guillotine at express speed, and had soon filled his basket with heads. The authorities, however, were more lenient, and thought fit to interpose. The prisoner was conducted back to prison, apparently none the worse for the loss of so many heads." Absurd as this story may seem, what can be said when, on reading further, we find that the editor of the *Citoyen* solemnly vouches for the truth of the whole circumstance, and in confirmation assures his readers that "Monsieur the Editor of THE LANCET (the great English medical journal), who is also Chief Physician to the Queen, has been ordered by Her Majesty to come over and investigate the case"! We congratulate the editor of the *Citoyen*, and should be glad if he would furnish us with his authority.

Mr. Rayner.—We are obliged to our correspondent for calling attention to the matter, which had escaped editorial notice.

THE CORONER OF OXFORD AND THE RADCLIFFE INFIRMARY.

WE are enabled to lay before our readers the following letter addressed to a member of the profession in London.

Oxford, 23rd November, 1877.

DEAR SIR,—In answer to the request you made to me some weeks ago, that I would give you the facts of the case, and the question raised upon them, I now do my best to answer your inquiries.

Do you think the oldest Judge on the Bench remembers having tried a case of murder where there was no prosecution by the police, no attempt to take the evidence of the dying man, no investigation by the justices of the peace, no prosecutor or witness bound over by them, no recognisances or depositions returned by their clerk? It was the case here.

That a drunken woman, whose habits were matter of public notoriety, should provide herself with a strange weapon, and inflict a wound, which was followed by a lingering illness and death, that neither police nor magistrates should give any help in the attempt to bring the offender to justice, is, it seems, consistent with our habits of administering the law; and the surgeon who, while he failed in the attempt to save life, succeeded in lengthening it, the coroner, who went beyond the strict line of duty to do an act of kindness, is the one person supposed to be at fault.

In a late case, where a coroner applied to the Court of Queen's Bench, the Chief Justice asked, "Does Dr. —— [the coroner] seriously think that his conduct requires vindication?" Mr. Justice Mellor asked, "Is not life too short to treat this as a serious matter?" The Chief Justice added, that it was one of those charges which a strong medical man would look down upon with contempt.

The medical history of the case can be given in very few words. The man had a traumatic aneurism in the gluteal region, the result of a wound given by his wife. I saw him at his own house in consultation with the medical officer of his club. We advised treatment at home. He refused this from fear of a repetition of the violence. Some time afterwards he came into the infirmary. I performed the usual operation, and applied a ligature on each side of the wound in the artery. Sloughing, with hæmorrhage, followed, and the man died.

In the meantime I had been appointed coroner of the city, and on the death of the patient in the infirmary within the city it became my duty as coroner to hold the inquest. The man's own house, where I had first seen him, was beyond the boundary of the city. If he had died at home one of the coroners for the county would have acted. I mentioned the case to the coroner of the district, and warned him of the possibility of the man's death in his district, and I told him, from the information I had received, the serious nature of the case which might perhaps come before him. At the time of the man's death his home had been broken up. It was not possible, therefore, to remove his body to the place, and so bring it within another coroner's jurisdiction. The inquest was the first act of office on my part. I had no power to appoint a deputy, nor to call an assessor. I was the only coroner having jurisdiction. Upon the best consideration I could give, it seemed to me that I had no choice but to take the duty of the inquest upon myself.

No witness was brought by the police. The information given by the two or three persons who attended was scanty in every sense of the word; but there was enough to satisfy the jury of the nature of the death and the person who caused it, and to justify them in referring the case to a tribunal of larger jurisdiction. As the woman was at large, I gave a warrant to arrest her, and take her before a justice of the peace.

After arrest by the police it appeared that, however willing the justices might be to act, their clerk was not at hand, and they could not act without him. The woman must be kept by the police for two days and nights till all things were in readiness for inquiry to be made by the magistrates. The inspector of police came to me in the difficulty. He appealed to my personal knowledge of the character of the woman and the place where she would be confined, and he asked for my authority to transfer her to a fitter lodging within the Castle. It seemed to me an act of kindness which I could not refuse to a poor woman whose husband had been lately under my care, and I gave a warrant for the purpose. I never doubted that the magistrates would act on the warrant under which the arrest had been made. It may be doubted whether a lawyer would have done as much. It is more likely that he would say to the police, "You have the prisoner in custody on suspicion of felony. My duty is done."

In the charge to the grand jury, the Judge pointed out the omission on the part of the justices of the peace to investigate the case, and he called their attention to the consequences which might follow through neglect of the legislative enactments on the subject. "This is a most extraordinary case," he afterwards said, "in consequence of no depositions being returned."

Application was made on behalf of the prisoner for an adjournment of the trial. The Judge, the proverbial counsel for the prisoner, refused it, with the remark that he did not see what benefit it would be to her—a reason clear enough from the prisoner's point of view. The period of adjournment would have given time for inquiry, for the action of the police and the magistrates, and, with other evidence at another assize, another verdict might have been found. In the case of the Welsh fasting girl, the omission to return depositions and bind over witnesses was discovered on the eve of the assizes, and the trial was adjourned by order of Chief Justice Bovill to enable the magistrates to complete the necessary investigation.

After some loose and inaccurate evidence given at the beginning of the trial, it became necessary to say what was the operation really performed, and what was the cause of death, and there was no other course but to call me as a witness. It would have been overloading the case with medical evidence to call the surgeon who assisted me at the operation to confirm the evidence I gave.

While I was under examination, the Judge, without asking for any explanation, told me that, instead of holding the inquest myself, I should have called in one of the other coroners. The clerk of the peace for the county, who was present as a spectator, instantly corrected the Judge. Turning again to me, the Judge said, "I would have appointed a deputy." I said I was not aware that the deputy could act, except in case of my illness or unavoidable absence. The clerk of the peace interposed, with the remark that the former coroner had a deputy, and that I could have appointed one in eight-and-forty hours. In truth, if the occasion served, as it did with my predecessor, I could have appointed one in eight-and-forty minutes. Afterwards a book, supposed to be of sufficient authority, was found and handed to the Judge, and the doubt I had expressed was tardily but openly acknowledged.

It would be well that a man should inform himself fully before he takes on himself, as *amicus curiæ*, to guide an erring judge. The maxim of the lawyers, *Ignorantia legis neminem excusat*, does not apply to themselves. Moreover, says Dr. Johnson, "Ignorance cannot be certainly inferred from inaccuracy. Knowledge is not always present."

Before I retired I received the comforting assurance that the Court gave me credit for the performance of the operation; but whether it was the operation really performed and described by me I was not told. "Nobody knows," said Chief Baron Alexander, "how much energy it requires in a judge to hold his tongue."

In charging the petty jury, the Judge gave his opinion, without the appearance of its being pertinent to the case before the Court, that a coroner should be a man of legal education, in order that the information given by the witnesses at an inquest might be put into a shape to be produced as evidence—the shape, it may be added, in which a judge is accustomed to receive it; and that a surgeon, when coroner, should appoint a deputy or resign his office as soon as he thinks a patient likely to die; that a coroner was a judge, performing judicial functions, and acting in a judicial capacity.

In the matter of evidence I pointed out to the jury on the inquest the difference between the information given on an inquiry into the cause of death and the evidence given before a judge and jury on the trial of a prisoner for a criminal offence. A coroner is not a judicial officer like a justice of the peace; he does not act in the same judicial capacity; he does not perform similar judicial functions; he is not a judge engaged in trying a question at issue between two parties. What is said at an inquest by those who come voluntarily as witnesses differs in many respects from the evidence given before a judge and jury at a trial, none of which is produced until the whole of it has been carefully sifted by opposing advocates keenly alive to the interests of their separate clients.

After having been for many years a reader of the published reports of inquests, I do not call to mind a case where a question of law came before the jury, or one where the special knowledge of a practising lawyer was wanted. Since the Balham inquest we have not heard much of the advantage of always having a lawyer for a coroner. A knowledge of law and of legal forms of procedure is a becoming ornament to a coroner as well as to a justice of the peace, to a police constable, and a magistrate's clerk. With a proper knowledge of these, and a due attention to the duties required by them, prosecutor's recognisances and depositions would not be wanting. It is not part of the duty of a coroner to provide them.

However odd it may seem to you at a distance, it is notorious here that the question raised at the meeting of Governors was a personal one, and a question of local interest only. It was simply whether one of the former physicians, who is now one of the professors in the University, was at length strong enough, with the help of the Chairman of the Committee, to turn me out of the office of surgeon to the infirmary. But the talking, to which nobody paid much attention, went to the point whether a medical practitioner should in any case hold the office of coroner, either in the infirmary or out of it.

I am, dear Sir, yours truly,

E. L. HUSSEY.

BUTTER ANALYSIS.

THE prize offered by the Leipzig Pharmaceutical Association for a trustworthy method of butter analysis has been awarded to Otto Hehner, F.C.S., public analyst for the Isle of Wight, and Arthur Angell, F.R.M.S., public analyst for the county of Hants. As one of the stipulations of the Association—namely, that the successful essay should become its exclusive property—could not be fulfilled by Messrs. Hehner and Angell's method, it having been published some years ago, and as the examiners yet wished to show their appreciation of the method, they presented the authors with the sum of 150 marks. Six essays competed—two from Germany, two from England, one from Austria, and one from Italy.

Dr. Cornelius Fox.—We are unable to answer the question off-hand, but will inquire.

M.B., B.A.—Anatomy: Gray, Quain. Physiology: Kirkes, Foster. Medicine: Niemeyer, Roberts, or Bristowe.

FUNERALS AND DANGER OF INFECTION.

THE Brooklyn Board of Health, New York, being of opinion that the public funeral of any person who has died of scarlet fever, diphtheria, or measles is dangerous to those attending the ceremony and to public health generally, have adopted a regulation, which ordains that in every case where death occurs from either of the diseases before mentioned, the body of the deceased shall be thoroughly disinfected, and enclosed in a tight (metallic when possible) burial case, which shall not be hereafter opened; that the funeral of such person shall be strictly private, and in no case shall children be allowed to attend it; and that the room in which the deceased person was treated and the clothing and bedding used during sickness shall be disinfected. The medical profession everywhere cannot but regard this regulation as a most salutary one, and worthy of adoption in every town. It would only be necessary to particularise instances of outbreaks of infectious disease undoubtedly caused through the medium of funerals to overcome any prejudices which might exist against the general enforcement of such a wholesome measure in this country.

T. M. B.—We cannot name a surgeon.

A SUGGESTION AS TO ANTIPERIODICS.

To the Editor of THE LANCET.

SIR,—In the current number and previous ones of THE LANCET allusion has been made by two correspondents to the efficacy of strychnia as a prophylactic in lieu of quinia. The intention of the first of these gentlemen referred to was to secure in the present quinine famine a substitute for that drug in the form of strychnine—a most potent remedy, it will be admitted, for good or for evil. When it is suggested to use strychnia in all the excitement of a campaign, where it must needs be, I suppose (as in the present war in the East), often difficult, if not impossible, to be sure of the strength of your dose—an all-important matter when dealing with strychnine, and therefore much against its general adoption in the arena of warfare,—if anybody were to step forward with a less formidable and equally efficient remedy, I apprehend that man would be doing a public service. Strychnia is given in neuralgia, and from his we may draw an inference that it will be of value in other ailments of a regularly recurring character, as, for instance, in the three principal types of intermittent fever, and, as a matter of fact, strychnia did replace quinia in the practice of two surgeons. But, looking to the dangers of strychnia, I contend it is quite an unsuitable weapon at a seat of war, even "after the battle is over," unless we wish to swell the numbers of the "dead and dying." A similar objection refers to arsenic. Salicin is too expensive, less powerful, and less reliable; and sulphate of beberia is disappointing. But surely pepper and cobweb are always at hand, and simple things. Is it not generally known that a teaspoonful of pepper in a glass of gin has been known to cure when quinine has failed? Moreover, is not cobweb a powerful antiperiodic? Why not then give either of them or both a fair trial? They have at least the merit of constant supply—a point of some importance with an army in the field, while a better opportunity than the present for testing their value can scarcely occur.

I commend this subject most respectfully to the attention of the Red Cross Society.

Yours truly,

Knowle, Devon, Nov. 21st, 1877. HERBERT KIRKPATRICK.

A Subscriber.—A qualified man is certainly not justified in signing certificates for cases not seen by himself, but treated by an *unqualified* assistant. The relationship does not affect the question. The proposed column in the Schedule of the Medical Act, defining titles, was not filled up; but it is difficult to understand how a L.S.A. can, *on that qualification alone*, describe himself as a "surgeon."

ERGOT IN MIDWIFERY PRACTICE.

To the Editor of THE LANCET.

SIR,—I noticed a discussion a short time ago as to the merits and demerits of ergot. My experience has not been great; but so far it is altogether in favour of the drug. I have before me the notes of 825 consecutive cases attended by me, and find that in *all* these cases it had the desired effect of increasing the pains, and aiding the firm contraction of the uterus after delivery. I have never seen a case of post-partum hæmorrhage. I have been rather lucky on the whole, as I find recorded only two forceps cases, two turning, two retained placentæ, and one death from puerperal fever. Perhaps my rather singular freedom from cases of flooding may be accounted for by the healthy class most of my patients belonged to—farming and fishing population, as a rule, are strong and robust. Still I spent some years amongst the ironworkers of Yorkshire. I always give a full dose half an hour or so before the end of the second stage, and even when it has happened that the child was born before my arrival I give it as well. I use a granulated preparation made by a Newcastle-on-Tyne firm, and have always found it act well.

I should be very much obliged to any of your corespondents who would give their experience of ergot, especially as to its power of preventing post-partum hæmorrhage.

Your obedient servant,

Westray, Orkney, N.B., Nov. 22nd, 1877. L.R.C.P. Edin.

To the Editor of THE LANCET.

SIR,—I propose within a short time to forward to THE LANCET an analysis of my last 1000 cases of midwifery upon the plan so well laid down by Mr. Playfair. Meanwhile let me express my surprise at the opinions of your correspondents as to the use and value of ergot. I have never been disappointed with its action since I first commenced attending midwifery, thirty-one years ago. When the os is pretty well dilated, the passages moist and dilatable, the membranes ruptured, and the pains are feeble, it is of valuable service. But it is in threatened hæmorrhage, from the flabby and anæmic state of the patient, that a dose of ergot immediately preceding the birth of the child is most satisfactory in its results. Let your correspondents eschew all fancy preparations, and give from two scruples to one drachm of the powdered ergot, stirred into warm tea, and administered quickly. I admit that this is not an elegant dose; but it is most reliable and never failing.

Your obedient servant,

Winslow, Bucks, Nov. 24th, 1877. THOMAS NEWHAM, M.D.

THE PERILS OF THE JUNGLE.

THE annual statement of the number of human beings killed by wild animals and venomous snakes in the Madras Presidency has just been published. It appears that during 1876 no less than 819 deaths were caused, within the above-mentioned area, by the bites of snakes, and 162 by the attacks of beasts of prey. The loss of cattle by the same means amounted to 10,322 head. It is a remarkable, and would appear to be a very unwise, arrangement, that though the fatality from snake-bites is vastly greater than that accruing from the assaults of ravenous beasts, yet prizes—varying from two to twenty-five rupees—are offered by the Government for the destruction of the latter, while no such inducement is held out in favour of the extermination of venomous reptiles. These amiable creatures consequently enjoy comparative immunity, whilst the *Felidæ* are hunted and slain in large numbers. The figures above quoted show, moreover, the need for yet more strenuous efforts than have hitherto been made towards the discovery of a ready and efficient antidote against the subtle poison of snakes.

INFANT MORTALITY.

To the Editor of THE LANCET.

SIR,—I have read with interest your leader on the above subject in the present issue, and would like to point out to the Macclesfield authorities one of the means we adopted here some four years ago, and which we have reason to believe has done much good. Believing that a great deal of ignorance prevailed on the rearing of children, I got permission from the Health Committee to procure 10,000 sheets of Dr. Lankester's Plain Rules for the Management of Infants, and divided them amongst the registrars of the district, with the request that they would give one to each person that registered a birth. This, I believe, was done for two or three years, with manifest good in the reduced infant mortality.

I should like also to say a few words on the *causes* of the great infant mortality as given by the Committee of Inquiry at Macclesfield. They may be briefly stated thus:—1st. Factory labour of mothers. 2nd. Hired nursing-out. 3rd. Improper feeding and drugging. 4th. As the result of this, an insanitary condition of the dwellings &c., which leads to intemperance. Now, Sir, my experience would lead me to reverse the order of the above, and put the last first. Allow me to state the order in which I have almost invariably found these cases (and I could fill your columns with them): 1st. Intemperance of the father. 2nd. As a consequence mother must go to factory. 3rd. As a further consequence the child must be put out to nurse. 4th. With such nursing it is improperly fed and fatally drugged. I submit that this is the most natural and the most logical order of causes, and which I know to be true.

Things are not quite so well just now; but for some considerable time the working men of the northern counties have had wages sufficiently good to keep their wives at home, if the wages had been taken home; but if the working men will not do it, the Legislature ought to enact that no married woman should be employed in factory labour, and this would only be in harmony with the law already in force, which compels children to remain "short-timers" till they reach a certain age.

I am, Sir, yours truly,

D. AINLEY, L.R.C.P., &c.,

Halifax, Nov. 20th, 1877. Officer of Health.

GOA POWDER IN PSORIASIS.

IN the *Indian Medical Gazette* Dr. Theobald Ringer reports the cure of a patient who had suffered for a year and a half from obstinate and intractable psoriasis by the use of goa powder. After all kinds of treatment had been tried in vain, the diseased parts of the body were gently rubbed with water by means of a small piece of sponge, and while wet a little of the powder was applied with the finger. This was repeated every morning, and within a fortnight the disease had disappeared. For the first few days the patches assumed a white appearance in the centre, surrounded by a circular rosy areola, with irritation of skin; but a temporary cessation from the treatment induced a healthy appearance of the tissue.

Mr. S. E. Pritchard.—1. Roberts's or Bristowe's Medicine.—2. We cannot tell. Apply to the publishers.—3. Liebreich or Wecker.

"TYPHUS FEVER IN CHATHAM."

To the Editor of THE LANCET.

SIR,—Among your annotations in last week's LANCET it is stated that "several cases of typhus fever have lately occurred in Chatham." This is, I have no doubt, a mistake, which I should like to see corrected; for as medical officer of health I should certainly have heard of it if such had been the case. There have been a few cases of *typhoid* fever confined to two adjoining houses in a back street, one of which proved fatal. I may state that after a residence in Chatham of nearly twenty-six years I have never known of an outbreak of typhus fever in the place.

Yours very truly,

J. B. JARDINE, M.D.,

Chatham, Nov. 26th, 1877. Medical Officer of Health.

Truth.—It was a great mistake to deal with two parties when one should have been sufficient, and we fear that our correspondent would be liable to both.

A. J. L.—The statement that "there are not five chemists in London who sell pure drugs" is too absurd to call for contradiction.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—Together with a few friends I am desirous of soliciting the charitable benevolence of the profession on behalf of the family of a medical man, who, through illness and misfortune, are at present in the most abject poverty and distress. I feel certain that an appeal will not be in vain, and shall be glad to receive subscriptions, and acknowledge the same, with your kind permission, in this journal.

I am, Sir, yours faithfully,

Easingwold, near York, Nov. 27th, 1877. JOHN JAMES ETHELL.

A NEW PUNISHMENT FOR DRUNKARDS.

THE commissioners appointed by the Common Council of Boston to inquire into the punishment of drunkards have issued their report. They are of opinion that a fine is no punishment to the drunkard himself, but to his family; and that short terms of imprisonment do no good; nothing, in fact, less than one year's enforced abstinence being likely to produce any benefit. The commissioners suggest that the treatment should aim primarily at the reformation of the drunkard, and advise that he should not be committed to prison, but placed in an asylum for a protracted period, with discretion in the hands of the authorities to grant probationary absence on prescribed conditions.

Mr. Wm. Bennett.—There is probably a rule of the club determining whether surgical cases the result of accident are included. Our correspondent should inquire.

SAN REMO OR BORDIGHERA.

To the Editor of THE LANCET.

SIR,—Will any of your readers, having visited either of the above places, kindly give me a little information as to situation, climate, accommodation, and expense, best and nearest route, and preference for either?

Yours &c.,
November, 1877. A MEMBER.

Beginner.—It is for the gentleman settling in a neighbourhood with an intention of practising to call upon the medical men already in the field. The customary social rule scarcely applies. The new-comer should report himself to his seniors in the locality, and by paying his respects, so to say, present his credentials. The return visits will constitute professional recognition.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Johnson, London; Dr. Marion Sims, Paris; Mr. H. Lee, London; Mr. Maunder; Dr. Beale; Lord Blantyre, Glasgow; Surgeon-Major Coy, London; Dr. Atthill, Dublin; Mr. Gotto, London; Dr. Stoulz, Marseilles; Mr. Wigg, Derby; Mr. Hehner, London; Mr. Walters, London; Mr. Thomas, Birmingham; Dr. O'Neill, Lincoln; Dr. Whittaker, Burnbank; Mr. Wheeler, Chicago; Mr. Gillingham, Chard; Mr. Smallman, Wigan; Dr. H. Fisher, Chelsea; Mr. Moore, Lancaster; Mr. Bond, Brill; Mr. Price, Wolverhampton; Mr. M'Donald, Carbost; Mr. Bowes, Newry; Mr. Kiernander, Knowle; Mr. Hallé, London; Mr. Hill, Milltown; Mr. Wright, Aberdeen; Mr. Leaver, Stratford-on-Avon; Mr. Stratton, Kidderminster; Messrs. Hales and Smith, Newark-on-Trent; Mr. Roe; Mr. T. Moore, Petersfield; Dr. Weir, Leicester; Mr. Roxburgh, Edinburgh; Dr. Foulis, Glasgow; Major-General Feilding, London; Mr. Lowndes, Liverpool; Mr. Nicholson, Greenwich; Mr. Mercer, Knightsbridge; Dr. Stevenson, London; Mr. Rugby, Rochdale; Dr. Highet, Troon; Dr. Scatliff, Brighton; Mr. Teevan, London; Mr. Williams, Sherborne; Mr. James, Liverpool; Dr. Newham, Winslow; Messrs. Southall and Co., Birmingham; Mr. Manson, Chesterfield; Dr. Diamond, Nuthill; Mr. Noakes, Torquay; Dr. J. Ridge, Enfield; Dr. Behrend, London; Mr. H. Morris, London; Dr. Jardine, Chatham; Mr. Skerritt, Bristol; Dr. Tomkins, Manchester; Dr. Daniell, South Kensington; Dr. Sturges, London; Mr. Jamieson, Shanghai; Mr. Poole, Dudley; Mr. E. G. Swann, London; Dr. Semple, London; Mr. Rayner, Uxbridge; Dr. B. Fenwick, Leipzig; Mr. Forrest; Mr. Ground; Mr. Crowniey; Dr. Drew; Mr. Upton; Dr. Sand, New York; Dr. White, Dublin; Dr. Beaufort; Dr. Williams, Croydon; Dr. von Cavania, Leeds; Dr. Edis; Mr. Holmes, Pontefract; Mr. Barker, Manchester; Dr. Woods, Dublin; Mr. Chavasse, Birmingham; Dr. Farnfield; Dr. Macewen, Glasgow; Mr. Rodda, Camborne; Dr. Stewart, Spalding; Mr. Coates; Dr. Ensor, Port Elizabeth; Mr. Reid, South Africa; Mr. Thornton; Mr. Mills; Mr. Vick, Ipswich; Mr. Bull; Mr. Pilkington, Dominica; Mr. Henry; Mr. Draper; Dr. R. King; Dr. Elam; Mr. Carter; Dr. Smith, Kilburn; Dr. Wood, Cranbrook; Mr. Stark; Mr. Leake; Dr. Russell, Worksop; Mr. Rundle; Mr. Reece; Mr. Sparrow; Dr. Glen, South Bank; A. J. L.; Delta, Madras; Juvenis; A Subscriber; F. B. C.; Vendall; L.R.C.P. Edin.; Beginner; Physician; The Registrar-General of Edinburgh; M.P., M.R.C.S.E.; M.B., B.A.; A Stern Parient; The English Anti-tobacco Society; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Anderson, Cramlington; Dr. Wallace, Cardiff; Messrs. Paterson and Co., London; Mr. Pollard, Edinburgh; Mr. England, Cork; Mr. Meredith, Dublin; Messrs. Bennett and Son, Ipswich; Mr. Hayden, Tunbridge Wells; Messrs. Porteous and Co., Glasgow; Dr. Bramwell, Newcastle-on-Tyne; Mr. Pugh, Llanfyllyn; Messrs. Smith and Son, Manchester; Dr. Duke; Messrs. Holdernesse and Co., Manchester; Messrs. Gillow and Co., Leith; Mr. Robertson, Glasgow; Dr. Hardwicke, Sheffield; Dr. Clark, Folkestone; Mr. Buzzard, Leicester; Mr. Baker; Dr. Eberle; Mr. Watkins; Mr. Crowther, Acton; Mr. Buller; Mr. Smith, Southport; Mr. Stuart; Q. S., Bellebrook; Practitioner; M. B.; A. B., Plymouth; Medicus, Tipton; A. B., Leicester; B. M., Belfast; B. T., Oxford; G. G. M., E. S., Addiscombe; Epsilon; L.R.C.P.; Number; G. H. L.; Medicus, Huddersfield; H. G.; A. B., York; Surgeon, Plymouth; Undergrad.; Medicus, Edinburgh; M. A. K.; Medicus, Glasgow; B., Newcross; K. W., Richmond; Medicus, Bridgnorth; Medicus Rusticus.

Manchester Examiner, Faringdon Advertiser, Kentish Mercury, Kensington News, Chester-le-Street Times, Essex Telegraph, Dudley Herald and Wednesbury Borough News, Pontefract Advertiser, Sheffield Independent, Port Elizabeth Telegraph, &c., have been received.

METEOROLOGICAL READINGS

(Taken daily at 8 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, NOV. 29TH, 1877.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia in Vacuo	Max. Temp. Shade	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Nov. 23	29·56	W.	41	45	...	50	43	0·12	Hazy
,, 24	29·50	E.	40	41	...	54	38	...	Foggy
,, 25	29·81	N.W	37	41	...	45	39	0·31	Fine
,, 26	29·98	W.	37	39	...	51	34	...	Foggy
,, 27	29·34	W.	40	51	...	53	38	0·21	Cloudy
,, 28	29·30	W.	40	42	...	50	38	0·47	Cloudy
,, 29	28·84	S.W.	47	49	...	49	39	0·63	Raining

Medical Diary for the ensuing Week.

Monday, Dec. 3.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. General Monthly Meeting.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Weakes, "On the Connexion between Stomachic and Labyrinthine Vertigo."

Tuesday, Dec. 4.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be exhibited:—Multiple Sarcoma in a Boy (living specimen); Multiple Tumours of the Brain; Specimens of Chylous Urine; Urine from a Case of Phosphatic Diabetes; Gangrene of the Lung in a Case of Lead-poisoning; Case of Softening Syphiloma of the Liver; Dermoid Cysts growing along line of Branchial Fissures; Specimens from a Case of Paralysis Agitans; Symmetrical Sarcoma of Osa Ilia, with Hyperostosis of Cranium; Cerebral Tumours in a Monkey; Case of Chyluria; Fat from a Case of Chyluria; Specimens of Diaphragmatic Hernia.

Wednesday, Dec. 5.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1½ P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Dr. Redwood, "On Secondary Puerperal Hæmorrhage."—Dr. John Bassett: "Cases of General Dropsy in the Fœtus."—Mr. Thompson, "On complete Rupture of the Perineum."—And other papers.

Thursday, Dec. 6.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HARVEIAN SOCIETY.—8 P.M. Ballot.—8½ P.M. First Harveian Lecture: Dr. Grailly Hewitt, "On the Mechanical System of Uterine Pathology."

Friday, Dec. 7.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 8.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under ..... £0 4 6 | For half a page £2 13 3
For every additional line ... 0 0 6 | For a page 5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.

N.B.—All letters relating to Subscriptions or Advertisements should be addressed to the Publisher.

Agent for the Advertising Department in France—
MONS. DE LOMINIE, 293, Rue Grenelle St. Germain, Paris.